Pliny the Elder's History: Recording the past in the *Naturalis Historia*

by

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Supervisory Committee

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Abstract

Pliny's *Naturalis Historia* is remarkable for its references to its sources throughout the text. There is little space between citations in the text, and Pliny provides much information in indirect statements. As a result, scholarship previously treated the work as a compilation. Pliny appeared to echo his sources, and so he provided a treasury of literary fragments which scholars attempted to extract. More recent scholarship has observed that Pliny's use of the *auctores* is more involved than mere repetition. He criticizes, questions, compares, contrasts, and denies their statements. Similarly, recent scholarship, notably Doody, has demonstrated that identifying the *Naturalis Historia* as an encyclopedia is anachronistic, but both Doody and Naas make only passing remarks about the text being a *historia*. I argue in this thesis that the *Naturalis Historia* is a Roman *historia* and that Pliny's references to his sources function within this historical project. Pliny's moral *exempla*, attempts to perpetuate *mos maiorum*, and self-professed obligation to the past all reflect the Roman historiographic project of his work. According to this perspective, the *Naturalis Historia* re-envisions Roman history intellectually. Thereby, Pliny's work tries to preserve and disseminate knowledge, encourage intellectual pursuits, and hopes for their persistence in posterity.

Table of Contents

Note on Abbreviations, Editions, and Translations

All abbreviations follow the *Oxford Classical Dictionary*. All Latin and Greek translations in this thesis are my own. When quoting Latin and Greek texts, I have used the following editions unless otherwise noted:

Anderson, J. *Cornelii Taciti Opera Minora*. Oxford: Oxford University Press, 1900.

Fisher, C. *Cornelii Taciti Annalium*. Oxford: Oxford University Press, 1906.

Mayhoff, C., ed. *C. Plini Secundi Naturalis historiae libri XXXVII*, 2 vols. Stuttgart: B.G. Teubner, 1967.

Ogilvie, R., C., R. Conway, C. Walters, S. Johnson, A. McDonald, P. Walsh, and J. Briscoe. *Titi Livi Ab Urbe Condita*, 6 vols. Oxford: Oxford University Press, 1919-2016.

Rackham, H., W.H.S. Jones and D.E. Eicholz, eds. *Pliny: Natural History. With an English Translation*, 10 vols. Loeb Classical Library. Cambridge, MA: Harvard University Press, 1938-62.

Reynolds, L.D. *C. Sallusti Crispi*. Oxford: Oxford University Press, 1991.

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Niese, B. *Flavii Iosephi Opera*, 7 vols. Berlin: Weidmann, 1887-1895.

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Introduction

"sed prodenda quia sunt prodita"

"But they must be given forth since they have been given forth."
- Pliny the Elder, *Naturalis Historia* 2.85

In 77 CE Pliny sent his *Naturalis Historia* to Titus. It was a catalog of the natural world, listing its lands, animals, plants, stones, and their medicinal properties. It was, at least Pliny claims, the first work with such a comprehensive approach.[1] It is unique among extant ancient texts for its thorough citation. The sources are cataloged in book 1 according to volume and cited throughout the text. Pliny is preoccupied with recording his sources even when he claims that they are incorrect. These citations became fragmentary sources for other lost works. Early scholars, such as Münzer, deemed Pliny valuable precisely for his repetition of these earlier authors.[2] More recently scholarship has recognized that Pliny does not echo his sources but refers to them critically. He occasionally criticizes, questions, denies, and even mocks their statements. However, even if he remarks that his sources' claims are outlandish, he repeats them.

In this thesis I identifiy Pliny the Elder's *Naturalis Historia* as a form of Roman historiography. Doody's recent study has argued that the text's reception has falsely identified it as an encyclopedia.[3] Both Doody and Naas refer to the text as a *historia*, but neither provides comment on this identification.[4] While Pliny's text is not a narration of past events, I demonstrate how Pliny presents the text as a *historia* through its title, the preface, and the use of moral *exempla*. Similarly, Clarke's recent examination of Hellenistic geography and historiography has demonstrated that genres were not as rigidly defined in ancient prose as once believed. Ancient

[1] Pliny, *HN praef.* 1, 14
[2] F. Münzer, *Beiträge zur Quellenkritik der Naturgeschichte des Plinius* (1897)
[3] A. Doody, *Pliny's Encyclopedia: the Reception of the Natural History,* (2010): 58ff
[4] V. Naas, *Le Projet encylopédique de Pline l'ancien* (2002): 57; A. Doody, *Pliny's Encyclopedia: the Reception of the Natural History,* (2010): 11, 39

prose instead incorporated multiple methods of presenting material which scholars, such as Jacoby, previously identified as distinct genres.[5] Ancient historiography could incorporate geographic and ethnographic descriptions. In turn, ancient geography could narrate past events. Pliny's text similarly possesses geographical and ethnographical content. As a result, this thesis does not aim to define the *Naturalis Historia* within a genre of history, but to recognize how it operates according to Roman practices of historiography. The identification of Pliny's text as a Roman history allows proper appreciation of the sources' citation throughout the text. Pliny's obsession with acknowledging his sources stems from an obligation he feels towards his predecessors and the past, turning his work into a historiographical effort. Furthermore, this thesis demonstrates that Pliny's concerns with literary continuity and posterity continue historical and antiquarian practices which Moatti has recently identified as occurring in the late Roman Republic.[6] I do not examine Pliny's accuracy in this thesis, although marginal comments appear in the footnotes, nor am I concerned with his quality as a scientist, which would prove a frustratingly anachronistic study. I instead aim to contextualize the *Naturalis Historia* within existing Roman literary and intellectual practices.

In the first chapter I examine the inappropriate identification of the *Naturalis Historia* along the other Roman texts incorrectly called Roman encyclopedias. The first, Cato's *libri ad filium*, is examined through its fragments and references made by ancient authors. Earlier scholars identified this text as organized into multiple disciplines, but there is little evidence for such a program.[7] Instead, Cato's work appears to have been a collection of maxims, lessons, and/or letters to his son. Varro's non-extant *Disciplinarum libri* is similarly termed a Roman encyclopedia. This

[5] K. Clarke, *Between Geography and History: Hellenistic Constructions of the Roman World* (1999): passim.
[6] C. Moatti, *The Birth of Critical Thinking in the Republican Rome* (2015): 106
[7] O. Jahn, "Über römische Encyclopädien" (1849): 263ff; A. Astin, *Cato the Censor* (1978): 332

work, as the title suggests, detailed nine distinct disciplines, of which fragments only attest medicine and architecture. Scholars have suggested other subjects, but connections between this work and the Medieval *trivium* and *quadrivium* remain speculative. The third Roman encyclopedia, Celsus' *Artes*, survives in its medical portion. I propose in the first chapter its other subjects. Agriculture appears sure, and military knowledge is another possibility.

After characterizing these works, the chapter discusses how these texts were classified as Roman encyclopedias according to *enkuklios paideia* has. The term, Greek in origin, referred to a general introductory education, and among Roman authors it is not a codified set of disciplines. Roman sources instead use the term loosely and propaedeutically. My conclusion is that the identification of all works as part of a single encyclopedic genre is only misleading. The texts of Varro and Celsus may reflect *enkuklios paideia* in their treatment of a broad set of disciplines; however, there is no evidence that contemporaries considered these works as part of a single genre. As well, there is no support that these texts possessed standard aspects of modern encyclopedias: a reference function, the summarily presentation of factual information, and a systematic method of organization. Conversely, the *Naturalis Historia* is more like modern encyclopedias. It has a reference function and summarily presents information, although its organization is not alphabetical. The work is undoubtedly encyclopedic; however, it is not like Varro's *Disciplinae* or Celsus' *Artes*. The *Naturalis Historia* is not an instructional manual on disciplines.

I continue the chapter to examine how scholars have interpreted Pliny's reference to *enkuklios paideia* as a programmatic statement for the text.[8] This relies on an emendation common

[8] M. Beagon, *Roman Nature: the thought of Pliny the Elder* (1992): 13; G. Conte, *Genres and Readers: Lucretius, love elegy, Pliny's encyclopedia* (1994): 176; N. Howe "In Defense of the Encylopedic Mode: on Pliny's 'Preface' to the 'Natural History'" (1985): 575; T. Murphy, *Pliny the Elder's 'Natural History': the Empire in Encyclopedia* (2004): 22

in early printed editions of the text. Other scholars, however, using Mayhoff's edition argue that Pliny uses *enkuklios paideia* propaedeutically.[9] I conclude the chapter with a translation and analysis of this portion of the text without any emendation. My examination observes how the Latin in all major manuscripts makes the passage more suitable to the surrounding context of the preface where Pliny discusses intellectual pursuits and literature.

The second chapter discusses geography and ethnography, the two major aspects of the *Naturalis Historia* treated by recent scholarship. I then comment in this chapter how both these reflect recent identifications of Roman imperialistic projects in the text. The chapter first examines Pliny's treatment of geography. Books 3-6 are a *periplus*, a long voyage. This presentation is hodological. Such geography moves along pathways on the surface, rather than using a disconnected cartographical presentation. The cartographical geographic material, while provided in the astronomical book, is delayed in the geographical books until the conclusion of book 6. Here, Pliny reduces the cartographical theories of Eratosthenes and Hipparchus to practical concerns. In book 2 Pliny notes familiarity with these cartographical theories, including the calculations of the Earth and a second habitable zone on the planet. This second area, however, is inaccessible and so Pliny's hodological approach in book 3-6 shrinks the world to the Roman *oikoumene*. This places a practical emphasis on the knowledge of the geographical books, but this section also notes the drawbacks of Pliny's geography as a travel guide.

The second chapter proceeds to comment on ethnography in the *Naturalis Historia*. While ethnographical treatments in the text are less thorough than others from antiquity, they still reflect Pliny's Roman program of organizing the world. I discuss in this section Murphy's recent

[9] A. Doody, *Pliny's Encyclopedia: the reception of the Natural History* (2010): 50; T. Morgan, *Literate Education in the Hellenistic and Roman Worlds* (1998): 35

examinations of the ethnographies and how they reflect Roman anxieties. I then discuss the Chauci in the *Naturalis Historia,* an ethnography particularly noted for differing from other ancient sources' descriptions of these northern tribes in Germany. For Pliny, the Chauci are a sad lot who inhabit a landscape incapable of sustaining plant life because of continuous tidal flooding. Scholars argue that this fantastical description stems from a Roman imperialistic program.[10] The section ends with an examination of Pliny's treatment of the Jews and Jerusalem in book 5. I argue in this section that Pliny's indirect comments about Jerusalem reflect the Flavian program of the city's obliteration. The second chapter then concludes by noting other imperialistic programs present in the *Naturalis Historia*. I note that the text's similarities to other Flavian programs, more general imperialistic inventorying aspects, and Pliny's primacy of Rome and Italy.

I examine in the third chapter how Pliny makes his text *utilis* through its reference structure. The text's catalogic presentation of material supports such use; however, Pliny's ordering undercuts it. I continue to examine how the text's digressive mode and use of the Stoic theory of sympathy and antipathy cause this seemingly sporadic system of ordering. I then discuss Doody's recent arguments that the text prefers a sequential reading to a reference use. I argue that, while Doody is correct that sequential reading of the text is possible and grants to the reader a proper appreciation of the digressive mode, book 1 as a summary of contents and the cross-references within the text undermine sequential reading and enforce a selective one.

In chapter 4, I then examine how Pliny establishes his text as a *historia*. The chapter begins with a discussion of the text's moralism. While initially criticized, scholarship has since recognized how the attacks on *luxuria* incorporate into the program of the text. I argue that such moralism is

[10] K. Sallman, "Reserved for Eternal Punishment: The Elder Pliny's View of Free Germania (HN. 16.1-6)" (1987); A. Fear, "The Roman's Burden" (2011)

also appropriate to the didacticism of Roman *historia*. I continue the chapter to discuss the ambiguity in the term *historia*, particularly in its differences between Greek and Latin uses. I proceed with an examination of Pliny's use of the term, finding that he plays with Greek and Latin senses of the word. I then note in the chapter how Pliny incorporates the didacticism of Roman historiography by using *exempla*. This section finishes with examining how Pliny associates the *utilitas* of literature with historiography. The chapter continues with a demonstration that the *Naturalis Historia* is an intellectual history particularly suited to the principate. I conclude the chapter by noting some differences between the *Naturalis Historia* and Seneca the Younger's similarly titled *Naturales Quaestiones*.

I begin the final chapter by analyzing Pliny's treatment of his sources. Pliny does not merely repeat his sources, nor is he exceedingly credulous. Instead, he condenses, analyzes, and provides his own observations. The chapter continues with an examination of how Pliny's dominant language of reference identifies a primary concern for literary transmission in his text. Pliny's citations using the verbs *tradere* and *prodere* establish a process of transferring knowledge through text. Furthermore, Pliny situates himself not at the terminus of this process, but within a continuity, aiming to provide for posterity. I conclude the chapter by commenting on the optimism Pliny expresses for posterity along with similar statements by Tacitus about this legacy of transmission. Both authors refer to a competition between generations which counters narratives of decline.

Chapter 1: That Dirty Word: "Encyclopedia"

Some identify Cato's *libri ad filium*, Varro's *Disciplinarum Libri*, and Celsus' *Artes* as encyclopedic precursors to Pliny.[1] Others, however, have recently challenged these origins. They have noted that these works were seemingly concerned with the liberal arts, while the *Naturalis Historia* focuses on the natural world.[2] Nevertheless, the identification of Roman works on the *liberales artes* as encyclopedias along with the *Naturalis Historia* persists.[3] I first explore in this chapter the organization of these three works, demonstrating that they are unlike Pliny's text. I then argue that the identification of these texts as encyclopedias stems from a conflation of terminology around the Greek term *enkuklios paideia*. I examine in the final portion of this chapter Pliny's use of this term in his preface and provides a new translation which supports the text given in the major manuscripts. This translation better contextualizes the sentence within Pliny's comments on contemporary production of intellectual literature.

Cato's *libri ad filium*

The contents of Cato the Elder's work addressed to his oldest son are especially nebulous. Ancient authors provide a few fragments with reference to Cato's *ad filium*.[4] Jahn proposed that these derived from a collective *libri ad filium*, a text for the young Marcus' education, with each book instructing in a certain discipline, including at least agriculture, medicine, and rhetoric.[5] Hence,

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[1] A. Astin, *Cato the Censor* (1978): 332; *Pliny's Encyclopedia: the reception of the Natural History* (2010): 41ff; T. Murphy, *Pliny the Elder's 'Natural History': the Empire in Encyclopedia* (2004): 13. Conte similarly assumes an encyclopedic genre for the *HN* (*Genres and Raders: Lucretius, love elegy, Pliny's Encyclopedia* (1994): passim.), although this need not define it as an encyclopedia proper.

[2] M. Beagon, *Roman Nature: the thought of Pliny the Elder* (1992): 13; A. Doody, *Pliny's Encyclopedia: the reception of the Natural History* (2010): 41

[3] Doody has produced the most thorough analysis of the text's reception (*Pliny's Encyclopedia: the reception of the Natural History* (2010))

[4] The fragments are collected in Jordan (*M. Catonis prater librum de re rustica quae extant* (1860): 77-80

[5] O. Jahn, "Über römische Encyclopädien" (1849): 263ff

this text was considered the first Roman encyclopedia.[6] Astin's analysis of the fragments finds no positive evidence for such a work. Only 11 of the 16 fragments mention that Cato addressed the work to his son. Jahn included the other fragments (10, 11, 13, 15, 16) for their agricultural and rhetorical contents. Only fragments 8 and 9, both from Servius, call the work "libri."[7] Other sources offer different titles for the text. Diomedes calls the work "ad filium vel de oratore" "to his son or on the orator" or, according to Lersch's emendation, "de aratore" "on the plowman."[8] Servius also cites material from "in oratione ad filium," similarly emended to "de aratione."[9] Nonius calls the text *praecepta*.[10] Priscian refers to an *epistula*.[11] Despite the fact that Cato's *epistulae* are a separate work in Jordan's collection, he considered this particular reference nonliteral.[12] Astin remarks that it is odd that Cicero never mentions a rhetorical text by Cato.[13] He further argues that Pliny's references suggest that he possessed a copy of the *ad filium*, and Cato's near absence in the medical books of the *Naturalis Historia* argues against a section on medicine in the *ad filium*.[14] Astin concludes that the *ad filium* had no specialized organization or liberal arts focus. Instead, Cato's treatise for his son was a general collection of "precepts, exhortations, instructions, and observations" without a strict organization and possibly contained in a single *liber*.[15] These views have been repeated by Gratwick, who dismissed the idea that it was an encyclopedia, and Briscoe suggests it may have been no more than a collection of exhortations.[16]

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[6] A. Astin, *Cato the Censor* (1978): 332
[7] Servius, *In Verg. Ge.* 2.95 & 2.412 respectively
[8] Fr. 3: Diomedes, (Keil) pg. 362.21-4. *De aratore* provided by Lersch, *Oratorum Romanorum fragmenta ab Appio inde Caeco et M. Porcio Catone usque as Q. Aurelium Symmachum. Collegit atque illustravit Henricus Meyerus Turiiensis. Editio auctor et emendatior* (1844): 445, cf. Jahn "Über römische Encyclopädien" (1849): 268.
[9] Fr. 6: Servius, *In Verg. Ge.* 1.46. Emendation of Jahn (Über römische Encyclopädien" (1849): 265)
[10] Fr. 7: Nonius, p. 208 (Lindsay)
[11] Fr. 4: Priscian, 7.59 p. 337.5-6 (Hertz)
[12] A. Astin, *Cato the Censor* (1978): 333
[13] Ib.
[14] Ib. 334-7
[15] Ib. 339
[16] Gratwick "Prose Literature" (1982): 143; J. Briscoe, "Cato" (1996): 1224

Doody, however, notes that the few fragments might deceive about what could have been a largely systematic work.[17]

To this, I suggest that some of this loose collection took epistolary form. Cicero, Festus, Plutarch, and Nonius all refer to Cato's *epistulae* addressed to his son.[18] Servius is the only author to call the *ad filium* "libri," and his use of the term *liber* is nondescript. He occasionally refers to "epistula ad aliquem" as "liber ad aliquem." He quotes a letter by Cicero to Brutus with "Cicero primo libro ad Brutum" "Cicero with his first book to Brutus."[19] Discussing *Belgica esseda*, he quotes Julius Caesar, "Caesar testis est libro ad Ciceronem III 'multa milia equitum atque essedariorum habet.'" "Caesar is a witness in his third book to Cicero 'It/he has many soldiers of the horse and chariot.'"[20] The quote comes from a lost text by Caesar, but it may derive from a letter to Cicero about Britain.[21] In the *Bellum Gallicum*, Caesar only uses the term *essedarius* for British charioteers, and twice he uses it with mention of their cavalry.[22] To Caesar, the cavalry and chariots were the remarkable aspects of the British army. Cicero was also interested in Britain. He requests details about the territory from his brother Quintus serving under Caesar there.[23] In the same letter, Cicero notes that he is simultaneously corresponding with Caesar.[24] Cicero likely made the same request for information about the region from the general. Thus, Servius may refer to a letter from Julius Caesar to Cicero, in which he informed Cicero about the British military forces. This letter came from a larger collection composed of at least three books. Servius' general references are likely the reason he is the only source to call the *ad filium* "libri." However, this

[17] A. Doody, *Pliny's Encyclopedia: the reception of the Natural History* (2010): 54
[18] Cicero, *Off.*, 1.11; Festus P. 145 M; 242 M; Plutarch, *Cat. Mai.*, 20.8; *Quaest. Rom.*, 39; Nonius, p. 208 (Lindsay)
[19] Servius, *In Verg. Aen.* 8.395
[20] Ib. 3.204
[21] Goduin considered the fragment "incertum". (*Julii Caesaris Quae Extant* (1849): 295)
[22] Caesar, *BG* 4.24 (promisso equitatu et essedariis); 5.15 (equites hostium essedariique), 16, 19.
[23] Cicero, *QFr.* 2.13.2: "modo mihi date Britannia" "only give to me Britannia"
[24] Ib. 2.13.1

naming indicates that the work was a larger assembled text.[25] Ultimately, the *ad filium* seems to have been a collection of various documents that Cato wrote for his son's instruction, perhaps throughout his life, including lessons given at home and letters written during Cato's and Marcus' absences (e.g. during military service).[26] The mentions by later authors of *orationes*, *praecepta*, and *epistulae* speak only to a loosely organized collection. These were later assembled into a single body like the letters of Cicero and Pliny the Younger.[27]

Varro's *Disciplinarum libri*

Whereas Cato's *ad filium* was not a programmatic account of liberal arts, Varro's *Disciplinarum libri* were more evidently such a project. This text was composed of nine books on nine disciplines, and each book likely discussed a single discipline. Vitruvius' reference suggests such a structure, "Terentius Varro de novem disciplinis unum de architectura" "Terentius Varro wrote one volume about architecture in his work about nine disciplines."[28] Cassiodorus and Isidore of Seville similarly indicate nine books.[29] Ritschl argued that the nine books were in the following order: grammar, dialectic, rhetoric, geometry, arithmetic, astronomy, music, medicine, and architecture.[30] His argument has the first three books embody the Medieval *trivium* (grammar, dialectic, and rhetoric), and the next four contain the *quadrivium* (geometry, arithmetic, astronomy, and music). Martianus Capella later omitted medicine and architecture to form the Medieval canon.[31] Hadot

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[25] Astin believes that Servius' use of *libri* for the *ad filium* is an error, and that the work was a single book (*Cato the Censor* (1978): 338). There is no indication of this, and it seems odd that Servius in both references would make the same error. Indeed, if the *ad filium* was such a collection of documents formed over the decades of Marcus' life, such could prove a lengthier work.

[26] Cicero, *Off.* 1.11.36 and Plutarch, *Quaest. Rom.* 39 indicate one letter of Cato advised his son to return from Macedonia after his discharge.

[27] Gratwick also suggests that the work was a later collection, possibly not even assembled by Cato himself. ("Prose Literature" (1982): 143)

[28] Vitruvius, *De arch.* 7. *praef.* 14

[29] Cassiodorus, *Inst.* 2.3.2; Isidore of Seville, *Etym.,* 2.23

[30] F. Ritschl "De M. Terentii Varronis disciplinarum libris commentarius" (1877)

[31] A. Doody, *Pliny's Encyclopedia: the reception of the Natural History* (2010): 52; D. Shanzer, "Augustine's Disciplines: Silent Diuitius Musae Varronis?" (2005): 69

was more skeptical. She argued that there was only direct evidence for medicine and architecture with little to no evidence for the rest of the work's topics or overall organization.[32] More recently Shanzer, however, finds Hadot too pessimistic, although she agrees with her that the text's organization is less certain.[33] Shanzer instead argues that 5th and 6th-century sources evidence the nine topic canon first alleged by Ritschl.[34] She argues that there are further allusions by Martianus, Claudianus, and Sidonius to the work's possible alternative title of *Musae*, since Varro had personified the *disciplinae* as the Muses.[35] Her observations, however, lack definitive evidence. It is not clear that Varro personified the Muses in this manner.[36] The tradition of generally naming nine-book works "*Musae*" had a long history. Herodotus' *Histories* were already called such.[37] Thus, Varro's nine-book *Disciplinarum libri* could have been called *Musae*, but that does not provide evidence that he personified the disciplines as muses. In the five centuries between Varro and the Gallic authors, another lost source could have provided this model. Aulus Gellius and Suetonius record that an Aurelius Opilius wrote a nine-book text with the title *Musae*, in which he titled each book/discipline with a Muse's name.[38] Nevertheless, Shanzer demonstrates that Varro remained a primary figure in the liberal arts of late antiquity and the *Disciplinarum libri* could have proven influential to the later canon. Hadot's arguments also hold that there is little direct evidence for the exact *disciplinae* which Varro treated. Ultimately, ancient references only demonstrate that the text was instructional on nine *disciplinae* or *artes*: architecture, medicine, etc.

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[32] I. Hadot, *Arts libéraux et philosophie dans la pensée antique* (1984): 122
[33] D. Shanzer, "Augustine's Disciplines: Silent Diuitius Musae Varronis?" (2005): 102-3
[34] Ib. 75-84
[35] Ib. 84ff. Dahlmann rejected that a work with such a title existed, and instead Cicero was merely referring to Varro's literary production. ("Silent diutius Musae Varronis quam solebant" (1978): 88)
[36] Maximus of Tyre in the 2nd-century CE seems to refer to such a tradition (10.9; D. Shanzer, "Augustine's Disciplines: Silent Diuitius Musae Varronis?" (2005): 94)
[37] D. Shanzer, "Augustine's Disciplines: Silent Diuitius Musae Varronis?" (2005): 84
[38] Aulus Gellis, *NA* 1.25.17; Suetonius, *Gram.* 6.2

Celsus' *Artes*

Unlike the previous two, Celsus' *Artes* partially survives in its medical portion. Early manuscripts testify that these eight books were once part of a larger collection with the title: "Cornelii Celsi artium lib. VI item medicinae primus" "Book 6 of Cornelius Celsus' *Artes*, the same as book one of the *Medicina*."[39] The preceding five books treated agriculture. Doody observes that the first medicinal book transitions from the topic of agriculture.[40] Columella states that Celsus wrote five books on agriculture.[41] Celsus himself refers to an earlier section where he explained medical treatment for sheep.[42] Quintilian states that Celsus also wrote on oratory, philosophy, law, and warfare.[43] Particularly, Quintilian's mention of warfare might suggest it formed part of Celsus' *Artes*. Speaking on polymaths, he says about Celsus, "non solum de his omnibus conscripserit artibus, sed amplius rei militaris et rusticae et medicinae praecepta reliquerit" "he wrote not only on all these arts, but also he left instructions on warfare, agriculture, and medicine."[44] This emphasis on the three topics suggests that Quintilian is referring to a single work. If Quintilian is merely mentioning the additional topics Celsus treated, then he would not need to mention agriculture. Quintilian has already noted that both Cato and Varro had written about it.[45] Celsus could have naturally brought medicine into the matters of warfare, just as he connects agriculture with medicine.[46] Treating wounds to prevent hemorrhage was a vital concern in ancient battle, and Celsus describes various treatments.[47] He also provides a detailed description of the surgical

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[39] A. Doody, *Pliny's Encyclopedia: the reception of the Natural History* (2010): 55
[40] Ib.
[41] Columella, *Rust.* 1.1.14; further references to Celsus on agriculture: Columella, *De Rust.* 2.2.15, 2.11.6, 5.6.23; Quintilian, *Inst.* 12.11.23-4; Pliny, *HN* 10.150, 14.33
[42] Celsus, *Med.* 5.28.16
[43] Oratory: Quintilian, *Inst.* 3.1.21, 12.11.24; Philosophy: 10.1.124; Law: 12.11.124; Warfare: 12.11.24
[44] Quintilian, *Inst*. 12.11.24
[45] Ib. 12.11.23
[46] Celsus, *Med. prooem*. 1
[47] C. Salazar "Treating the Sick and Wounded" (2013): 300-3; Celsus, *Med.* 5.25.21-3, 8.4

removal of arrowheads.[48] Thus, the *Artes* may have been a tripartite work treating agriculture, medicine, and warfare; however, the survival of only the medical portion suggests that the sections of the *Artes* were easily segmented.[49] Mastering medicine did not demand agricultural expertise. Furthermore, there is no definitive evidence for any topics other than agriculture and medicine. Only its general title and Celsus' polymathic reputation suggest that it discussed more.

The Roman "encyclopedia" and *enkuklios paideia*

Categorizing all these texts as encyclopedias along with Pliny the Elder's *Naturalis Historia* ultimately relies on generic expectations which are not representative of antiquity. Instead, it results from a conflation of terminology. The encyclopedia is not an ancient genre; the term was first used in 1559 in Paul Skalich's *Encyclopaedia seu orbis disciplinarum tam sacrarum quam prophanarum epistemon*.[50] The basis for an ancient genre relies on the phrase *enkuklios paideia*, the etymological origin of 'encyclopedia.' The term is typically translated as "general primary education."[51] Vitruvius using the term *encyclios disciplina* inclusively names grammar, drawing, geometry, history, philosophy, music, medicine, law, and astrology.[52] Quintilian using the term and then translating it as *orbis doctrinae* defines it as literacy, geometry, literature, astronomy, and the principles of music and logic.[53] Cicero defines the *artes* as literature, grammar, geometry, astronomy, music, and rhetoric.[54] Seneca translates *enkuklioi* as *liberales.*[55] He names grammar,

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[48] Celsus, *Med.* 7.5.2
[49] A. Doody, *Pliny's Encyclopedia: the reception of the Natural History* (2010): 56
[50] Ib. 48
[51] Ib. 45; H. Marrou *A History of Education in Antiquity* (1956): 176-7; T. Morgan, *Literate Education in the Hellenistic and Roman Worlds* (1998): 35; E. Rawson, *Intellectual Life in the Late Roman Republic* (1985): 118. However, Rawson argues that it excluded any "technical instruction." If so, then it would be difficult to call Varro's *Disciplinarum libri* representative of *enkuklios paideia* with its inclusion of architecture. Yet Rawson does later note the more general definition of *ars* present in Rome (Ib. 136), which more accurately reflects its general nature.
[52] Virtruvius, *De Arch*. 1.1.12–3
[53] Quintilian, *Inst.* 1.10.1ff
[54] Cicero, *De or.* 1.187ff, 1.135ff, 128, 149ff, 158, 2.28
[55] Seneca, *Ep.* 88.23, 33

literature, music, geometry, and astronomy.[56] These references indicate that at least grammar, literature, geometry, music, and astrology were standard topics, but also that there was some variation.[57] Referring to the Greek, Quintilian alone names logic; Cicero, rhetoric. Seneca distinctly separates philosophy from his *liberales artes* and *liberalia studia* throughout his letter to Lucilius, noting their inability to teach forms of *virtus*, such as *fortitudo, fides, temperantia, humanitas, simplicitas, modestia, moderatio, frugalitas, parsimonia,* or *clementia*.[58] These variations point to the more central aspect of *enkuklios paideia* as foundational education. For both Vitruvius and Quintilian, the term is propaedeutic to their specialized disciplines.[59] Thus, Quintilian does not name rhetoric like Cicero, since the *Institutio Oratoria* will include rhetoric as its primary topic. Seneca also upholds the propaedeutic model of *enkuklios paideia*. He indicates the *liberales artes* are for the education of youths, calling them *pueriles*, and so not worthy of the title "liberal."[60] He scorns those who excessively devote their time to these *studia* or *artes* rather than philosophy.[61] Instead, such disciplines, especially literature, should serve as the skills foundational and beneficial to obtaining *sapientia* and *virtus* through philosophy.[62] Such disciplines are taught precisely "quia animum ad accipendum virtutem praeparant" "because they prepare the mind for receiving virtue."[63]

If, as Morgan states, a standard of grammar, literature, geometry, music, and astrology existed, then Varro's and Celsus' texts do not accurately reflect *enkuklios paideia*.[64] In fact, Seneca

[56] Ib. 88.26-7, 32-3, 39-40
[57] T. Morgan, *Literate Education in the Hellenistic and Roman Worlds* (1998): 36
[58] Ib. 88.28-32
[59] A. Doody, *Pliny's Encyclopedia: the reception of the Natural History* (2010): 48
[60] Seneca, *Ep*. 88.23
[61] Ib. 88.35-9
[62] Ib. 88.33
[63] Ib. 88.20
[64] T. Morgan, *Literate Education in the Hellenistic and Roman Worlds* (1998): 36

characterizes the *enkuklioi*, or *liberales artes*, as distinct from material *artes*.[65] Quintilian's comments about instruction in music and logic also indicate that studies of these physical arts were theoretical rather than practical.[66] The only certain topics of either "Roman encyclopedias" are such practical skills: medicine, architecture, and agriculture. The variation, however, in ancient sources suggests that the topics of *enkuklios paideia* fluctuated. Both Vitruvius and Quintilian demonstrate the need to define the *artes* included in *enkuklios paideia* to their reader, and perhaps its mention is merely a rhetorical technique to elevate their topics.[67] This propaedeutic use defines it as a generalist body of studies. Cicero's definition of *ars* is similarly broad, and allows for any specialized topic to meet the classification including "generalship, politics, and acting."[68] Seneca, in fact, notes that his definition of the *liberales artes* "est non per praescriptum" "is not according to the rule."[69] He candidly rejects painting, sculpture, marble working, and "ceteros luxuriae ministros "other servants of luxury." He further debars wrestlers or else be forced to admit cooks and perfumers. Seneca here suggests that these manual arts, at least the first set, could and were regularly included among the *liberales artes*. In fact, his restriction of *liberales artes* to intellectual studies is a method of classification he adopts from Posidonius.[70] Thus, Seneca's restriction of *liberales artes* may have been atypical in Rome. Furthermore, Seneca makes no mention of the known topics included in the works of Varro and Celsus, but Vitruvius regards medicine as a branch of *encyclia disciplina*. Similarly, it must have been hard for some staunch Romans not to consider *agricultura* a standard *ars*. Thus, Varro's and Celsus' works still represented *enkuklios*

[65] Seneca, *Ep.* 88.21-3; Rawson 1985, 118. Rawson argues that *enkuklios paideia* or the *liberales artes* excluded any "technical instruction." Yet Rawson does later note the more general definition of *ars* (136), which more accurately reflects *enkuklios paideia's* generalism.
[66] T. Morgan, *Literate Education in the Hellenistic and Roman Worlds* (1998): 35
[67] A. Doody, *Pliny's Encyclopedia: the reception of the Natural History* (2010): 47
[68] Ib. 1.108; E. Rawson, *Intellectual Life in the Late Roman Republic* (1985): 136
[69] Seneca, *Ep.* 88.18
[70] Ib. 88.21

paideia as the initial studies in a general body of disciplines which benefitted successive, more specialized study.

The association of *enkuklios paideia* with *artes* resulted in defining the *ad filium*, *Disciplinarum libri*, and *Artes* as Roman "encyclopedias." This definition can serve as a modern category for at least the latter two, which explore *artes* typically included in *enkuklios paideia*. However, the Romans did not use such a term for these texts, nor is there evidence for another generic term. Instead, these works fell within the larger body of generically mutable ancient prose.[71] Perhaps Celsus, and others who wrote such multidisciplinary works, could have recognized themselves working within a tradition of such texts, but there is no indication for this. These works are encyclopedic in their efforts to collect and systematize information in multiple disciplines; however, Varro's, Celsus', and especially Cato's writings do not align with the modern conception of the encyclopedia.[72] They were instead instructional on specific branches of knowledge. So, one may term Varro's and Celsus' texts as "Roman encyclopedias" according to *enkuklios paideia*, but only with the caution and understanding that this is remote from the modern definition of encyclopedias. Ancient contemporary audiences possessed no notions of such a specific genre.

The *Naturalis Historia* and *enkuklios paideia*

The relation between these earlier "encyclopedias" (Varro's *Disciplinarum libri* and Celsus' *Artes*) and the *Naturalis Historia* originates from Pliny's use of the phrase *enkuklios paideia* in the preface. Pliny's statement, "iam omnia attingenda quae Graeci τῆς ἐγκυκλίου παιδείας vocant" "now everything must be attained which the Greeks call of *enkuklios paideia*" was taken with the

[71]A. Doody, *Pliny's Encyclopedia: the reception of the Natural History* (2010): 17; 45
[72] Ib. 45; H. Marrou, *A History of Education in Antiquity* (1956): 176-7

immediacy of "iam" to indicate that Pliny was the agent of "attingenda." Thereby, *enkuklios paideia* referred to the material treated in Pliny's text.[73] The *Naturalis Historia*, however, is notably unlike either Roman "encyclopedias." While Pliny may mention aspects of various *artes*, such as astronomy, agriculture, medicine, painting, and sculpture, he does not organize his text around such disciplines, excluding perhaps the medicinal books.[74] Furthermore, he provides no instruction on the practices of literature, grammar, or oratory, traditional topics in *enkuklios paideia*. Instead, Pliny's focus is *natura* and all that it contains. Book 2 is more like Lucretius' *De Rerum Natura* in astronomical focus. Books 3-6 seemingly imitates Strabo's *Geography.* Books 8-11 are like Aristotle's *Historia Animalium*. Books 12-27 draws comparison to Theophrastus' *Historia Plantarum*.[75] Pliny notes the novel nature of his project in the preface, "nemo apud nos qui idem temptaverit invenitur, nemo apud Graecos qui unus omnia ea tractaverit" "There is no one found among us who has tried the same; no one among the Greeks who has pulled all those topics together."[76] Similarly, the preface begins "Libros Historiae Naturalis, *novicium* Camenis Quiritum tuorum opus" "the books of the *Naturalis Historia*, a *new* work for the Muses of your Quirites."[77] The *Naturalis Historia*, however, appears remarkably like later encyclopedias and encyclopedic texts, such as Medieval bestiaries.[78] It discusses a broad set of material organized by

[73] M. Beagon, *Roman Nature: the thought of Pliny the Elder* (1992): 13; G. Conte, *Genres and Readers: Lucretius, love elegy, Pliny's encyclopedia* (1994): 176; N. Howe "In Defense of the Encylopedic Mode: on Pliny's 'Preface' to the 'Natural History'" (1985): 575; T. Murphy*, Pliny the Elder's 'Natural History': the Empire in Encyclopedia* (2004): 22

[74] A. Doody, *Pliny's Encyclopedia: the reception of the Natural History* (2010): 51. Pliny, however, in the last four books includes medicines of metals and stones with their original descriptions.

[75] Pliny, *HN* 21.13; A. Morton, "Pliny on Plants" (1986): 89

[76] Ib. *praef.* 14

[77] Ib. *praef.* 1. Howe, quoting this line argues that Pliny is inaccurate since he has precedence in Cato and Varro, and instead Pliny's "*national*" spirit is the new aspect. ("In Defense of the Encylopedic Mode: on Pliny's 'Preface' to the '*Natural History*' (1985): 571) Howe's analysis of this spirit may be true; however, he ignores that later in the preface Pliny makes it clear that he is referring to subject matter.

[78] T. Murphy*, Pliny the Elder's 'Natural History': the Empire in Encyclopedia* (2004): 11-12

topic and readily sectioned. The text has a reference use. Lastly, it possesses a factual tone.[79] There is an undeniable temptation to call the text an encyclopedia precisely because it appears like modern ones. Indeed, we may recognize the text as encyclopedic and even the precursor to the encyclopedia, but this is a matter of reception rather than conception.[80] I do not dare deny that the *Naturalis Historia* plays a vital role in the history of the encyclopedia and encyclopedism. It is undeniably prototypical, if not the prototype. However, it was not envisioned by its author or audience as such.

Moreover, there is dispute over the first word in the sentence. The principal manuscripts contain "an," which early editors emended to "iam." Mayhoff in the Teubner edition, as accepted by Rackham in the Loeb, edits "an" to "ante": "ante omnia attingenda quae Graeci τῆς ἐγκυκλίου παιδείας vocant." Mayhoff's emendation suggests that Pliny evokes *enkuklios paideia* as propaedeutic in a usage consistent with those of Vitruvius and Quintilian. Pliny similarly states that before studying a specialist topic, such as *natura*, one must be familiar with all subjects of this general body of learning.[81] Thus, in Mayhoff's edition, *enkuklios paideia* is not the topic of the *Naturalis Historia*.

Indeed, *enkuklios paideia* must precede the *Naturalis Historia*. The extensive body of literature Pliny references demands such holistic studies on his own part. So too, it is only beneficial for Pliny's reader. If they have not attained "omnia quae Graeci τῆς ἐγκυκλίου παιδείας vocant," they will not be familiar with his references. Although, even experts may have been unfamiliar with the *auctores*. Pliny claims that of the 2000 referenced volumes "pauca admodum

[79] Although Doody notes the difficulties of using the *Naturalis Historia* as a reference text through the *summarium* of book 1 (A. Doody, *Pliny's Encyclopedia: the reception of the Natural History* (2010): 123ff)
[80] Ib. 58
[81] Ib. 50; T. Morgan, *Literate Education in the Hellenistic and Roman Worlds* (1998): 35

studiosi attingunt" "few the very studious touch."[82] As elsewhere in Roman literature, *enkuklios paideia* is ancillary to Pliny's more specific project. However, that does not necessarily render Pliny's aim at a universal audience false;[83] the base information is still there. Although, Columella admits that laborers rarely had time for such studies.[84] A more specialized reader, likely Pliny's actual audience, could take greater interest in the authorities cited.

Despite the history of emendation and the difficulty of the statement, *an* works within the wider passage:

> Magna pars studiorum amoenitates quaerimus, quae vero tractata, ab aliis dicuntur immensae subtilitatis, obscuris rerum tenebris premuntur, *an* omnia attingenda quae Graeci τῆς ἐγκυκλίου παιδείας vocant et tamen ignota aut incerta ingeniis facta; alia vero ita multis prodita ut in fastidium sint adducta.
>
> A great part of us seek the pleasures of studies (which are said by others to be of immeasurable subtlety, however having been treated are pressed by the shady darkness of their topics), *or* [we seek] all studies that must be attained (which the Greeks call of *enkuklios paideia* and nevertheless have become unknown and uncertain by their genius; indeed other topics have been published so much that they have been brought into distaste.)[85]

Thus, the main clause reads "Magna pars studiorum amoenitaties quaerimus an omnia attingenda" "A great part of us seek the pleasures of studies or everything that must be attained [of *enkuklios paideia*]." The rest of the statement consists of two relative clauses which describe branches of *studia*.

The first branch of *studia* are pursuits of pleasure; however, their literary treatments obscure the topics. Possibly these were texts that gave the dimensions of the cosmos or prescribe its infinite contents. Pliny attacks these works at the start of book II:

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[82] Pliny, *HN praef.* 17
[83] Ib. *praef.* 6
[84] Columella, *Rust.* 9.2.5; G. Herbert-Brown, "Scepticism, Superstition, and the Stars: Astronomical Angst in Pliny the Elder" (2007): 116
[85] Pliny, *HN praef.* 14.

> Furor est mensuram eius animo quosdam agitasse atque prodere ausos, alios rursus occasione hinc sumpta aut hic data innumerabiles tradidisse mundos, ut totidem rerum naturas credi oportet aut, si una omnes incubaret, totidem tamen soles totidemque lunas et cetera etiam in uno et immensa et innumerabilia sidera, quasi non eaedum quaestiones semper in termino cogitationi sint occursurae desiderio finis alicuius aut, si haec infinitas naturae omnium artifici possit adsignari, non idem illud in uno facilius sit intellegi, tanto praesertim opere. Furor est, profecto furor, egredi ex eo et, tamquam interna eius cuncta plane iam nota sint, ita scrutari extera, quasi vero mensuram ullius rei possit agere qui sui nesciat, aut mens hominis videre quae mundus ipse non capiat.
>
> It is madness both that some have dared to pursue and publish its [the cosmos'] measurements with their mind, and that others, who took up or were given the opportunity from these earlier authors, published that there are innumerable worlds, so that it should be believed that there are countless natures of things, or, if one nature rests upon every world, that there are as many suns, moons, and immeasurable and countless stars in one. As if these inquiries would not always encounter the thought's end from the desire for an end, or, as if this infinity of nature could be assigned to the maker of everything, that the same would not be more easily understood in one world, especially for such a grand labor. It is madness, truly madness, to go out from this world and, as though all of its parts are already clearly known, to examine those beyond, as if truly it is possible to give the measure of any world who does not know his own, or that the mind of a human could see what the world itself does not possess."[86]

Pliny here details two types of published theories about the cosmos. The first attempts to give definitive measurements, both in the universe's size and contents. Pliny brands this exercise futile earlier in the book, "huius extera indagare nec interest hominum nec capit humanae coniectura mentis" "The things beyond this world neither are of importance for humanity to investigate nor does a conjecture of the human mind grasp it."[87] One reason is that the cosmos is *immensus*.[88] The second group in response theorize that the universe and its contents are both infinite. This infinity possesses two models. The first is an infinite variety in the kinds of worlds and solar systems. The second is a single system of nature, identical with our own, for every infinite cosmos. Pliny argues

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[86] Ib. 2.3-4
[87] Ib. 2.1.
[88] Ib. "Sacer est, aeternus, *immensus*, totus in toto, immo vero ipse totum, *infinitus ac finito similis*, omnium rerum certus et similis incerto, extra intra cuncta conplexus in se, idemque rerum naturae opus et rerum ipsa natura" "It is sacred, eternal, *immeasurable*, whole in the whole, no indeed itself the whole, *infinite and like the finite*, sure of all things and like the unsure, holding everything together beyond and within in itself, and both the work of the nature of things and the nature of things itself." Pliny's description of the cosmos as "infinitus ac finito similis, omnium rerum certus et similis incerto" suggests that those who have attempted to measure it have been fooled by its appearance. It may appear finite and sure, but in truth its nature is neither.

that the first branch is a method of thought doomed to fail due to human desire, or even need, for a conclusion. No one can write forever. So long as a study must end, it could never possibly recount the infinite. The latter, Pliny criticizes, is merely foolish for its active choice to ignore our world which possesses the same order of *natura¸* since it is more available for study. For either pursuit, he indignantly asks why and how one could learn about another world when they do not yet fully comprehend their own.[89] Pliny's use of *immensa subtilitas* in the preface is then a sarcastic comment on the folly of these texts in their attempt to define the immeasurable heavens (*caelum immensum*), its immeasurable and countless stars (*immensa et innumerabilia sidera*), and even what may lie beyond.[90] The *obscurae tenebrae* that press these topics alludes to the upper aether's dark appearance from earth, "supra lunam pura omnia ac diurnae lucis plena. a nobis autem per noctem cernuntur sidera, ut reliqua lumina e *tenebris*" "Above the moon everything is bright and full of daylight. However, we perceive the stars because of the night just as we see other lights in the *darkness*."[91] Although outer-space beyond the moon enjoys a constant clear visibility, those on Earth can only see these heavenly bodies through the darkness of night.[92] Their vision is filtered through nature's *tenebrae*, the night (*nox*). Thus, any attempts to study the astral bodies from earth are subject to an obscured view.

More generally, the language of *amoenitas* could suggest more entertaining literature, i.e. poetry, but the term *studia* does not align with such otiose literature, and Pliny focuses on prose

[89] This is also a source of hostility against these celestial investigations. They ignore the terrestrial matters of nature which are Pliny's focus. See Beagon for a discussion on Pliny's "terrestrial gaze" ("Luxury and the creation of a good consumer" (2011)).
[90] The phrase *immensa subtilitas* is not only pejorative in the *Naturalis Historia*. Pliny uses it describe his own explanation for the rates at which the planets rise and fall (2.68). The same phrase introduces the study of insects (10.212 and 11.1). Aristotle is "vir immensae subtilitatis" "a man of immeasurable subtlety" (22.111). The phrase is paired with Eratosthenes' calculation of the Earth's circumference (6.171). cf. M. Beagon, *Roman Nature: the thought of Pliny the Elder* (1992): 61
[91] Pliny, *HN* 2.48
[92] Excluding, of course, the sun and occasionally the moon.

throughout his preface.[93] These might instead be works on literature, such as the studies of Didymus, who wrote on Homer's birthplace, Aeneas' true mother, and whether Sappho was a prostitute. Seneca only had a distaste for such meticulous *studia*.[94] Both these literary/historical and astronomical branches of *studia* are hypothetical. Pliny notes that these treatises of infinite other worlds must end where they begin since, the details of the heavens and these other worlds are not available for the human mind to comprehend. These questions of remote antiquity or literary analysis similarly are hypothetical pursuits. How many rowers Ulysses exactly had or who precisely was Aeneas' mother may be fun questions to try to solve, but they lack definitive answers. Both subjects must remain in their *obscurae tenebrae* as hypotheses.

The second branch carries a sense of obligation as the subjects of preliminary education. They are opposed to the first branch since they are not recreational studies but an educational requirement. These, Pliny explains sarcastically, have become indiscernible due to Greek ingenuity. Alternatively, *ingeniis* refers to current Roman attitudes towards these *studia*.[95] Later in the *Naturalis Historia*, Pliny laments that senators began to be selected for their wealth. As a result, legacy hunting and material greed flourished. He continues, "pessum iere vitae pretia omnesque a maximo bono liberales dictae artes in contrarium cecidere ac servitute sola profici coeptum" "the prizes of life went to the bottom, all the arts called liberal fell from the greatest good into the opposite, and servitude alone began to be profitable."[96] Pliny laments the decline in pursuits of the

[93] Howe argues that Pliny in his preface is actively hostile towards poetry to prize prose as proper Roman writing ("In Defense of the Encylopedic Mode: on Pliny's 'Preface' to the '*Natural History*' (1985): 563)
[94] Seneca, *Ep.* 88.37. Although some of the material Pliny includes could be well fall under Seneca's category of trivial knowledge. (E. Lao "Luxury and the creation of a good consumer" (2011): 73-4).
[95] Thus, referring to *ingenium* 2a instead of 2b (Lewis and Short).
[96] Pliny, *HN*, 14.4-5. Murphy discusses how this passage creates a historical model where Roman expansion threatens indigenous knowledge (*Pliny the Elder's 'Natural History': the Empire in Encyclopedia* (2004): 70-1). Lao notes how it establishes an inverse relationship between the "arts of wealth and knowledge (E. Lao "Luxury and the creation of a good consumer" (2011): 40-1)."

liberales artes due to a preference for wealth.[97] Pliny explains which *artes* are instead earning attention: "avaritiae tantum artes coluntur" "only the arts of avarice are cultivated."[98] In this case, *ingenii* refers to contemporary Roman lack of interest resulting in a declining familiarity with these *studia*. Paired with this is the preference for more pleasant inquiries, the "studiorum amoenitates." For Pliny, knowledge is an essential quality of a *vir bonus*.[99] His contemporaries, however, seem to prefer more recreational, intellectual pursuits.[100] Finally, the last group in this passage, *alia*, are other topics in the second branch which have received so much treatment, likely because they are fundamental, that they have become a nuisance. These do not merely lack attention but have even earned distaste (*fastidium*).

This translation better contextualizes the sentence into the text. This passage occurs during Pliny's discussion about his literary project, and so refers to intellectual writing. Pliny begins the section in a humble tone, calling his work uninteresting.[101] He then boasts that there is no earlier Roman or Greek author who has embarked on the same project.[102] Within the passage, the phrase "ita multis prodita" indicates literary treatment. *Prodere* is commonly a term of publication.[103] Immediately after the quoted passage, he notes the difficulties of making material both credible

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[97] We have seen that Seneca associated *ἐγκύκλιος παιδεία* to the Latin phrase *liberales artes*.
[98] Ib. 14.4; cf. 2.118
[99] N. Howe, "In Defense of the Encylopedic Mode: on Pliny's 'Preface' to the '*Natural History*' (1985): 571-3
[100] *Mirabilia* were a particularly popular aristocratic interest among Pliny's contemporaries (T. Murphy, *Pliny the Elder's 'Natural History': the Empire in Encyclopedia* (2004): 57). Gaius Licinius Mucianus, a common source in the *Naturalis Historia*, appears to have written a collection of such wonders ("The Wonderful World of Mucianus" (2007): 1ff.). Naas argues that Pliny's incorporation of *mirabilia* reflects knowledge that is more appealing to a wider audience less interested in rational explanation ("Imperialism, *Mirabilia*, and Knowledge: Some Paradoxes in the *Naturalis Historia* (2011): 66-7). Beagon argues that Pliny includes *mirabilia* as a tactic to entice his reader ("The Curious Eye of Pliny the Elder (2011): 79). Pliny's incorporation of *mirabilia* is discussed later in chapter 5.
[101] Pliny, *HN praef.* 12
[102] Ib. 15: praeterea iter est non trita auctoribus via nec qua peregrinari animus expetat. nemo apud nos qui idem temptaverit, nemo apud Graecos, qui unus omnia ea tractaverit." "Additionally, this path is not a road worn away by authors, nor one by which the mind seeks to travel. No one among us has tried it; there is none among the Greeks who alone has treated all those matters."
[103] "Prodere" 1B2 (Lewis and Short)

and enjoyable.[104] He concludes by returning to a humble tone with the statement, "itaque etiam non assecutis voluisse abunde pulchrum atque magnificum est" "and so even with these having failed it was a suitably beautiful and noble intent."[105] If Pliny's statement about *enkuklios paideia* is a prescriptive claim about Roman education, it is a sudden shift followed by an immediate return to the previous topic of literary production. Instead, Pliny names the two declining approaches of writing *studia*: one pleasant but abstract and indefinite, the other fundamental but having become unfamiliar because of contemporary lack of interest or distasteful because of overtreatment. He then differentiates himself within this *magna pars*, and provides his own opinion on the matter, "Equidem ita sentio, peculiarem in studiis causam eorum esse, qui difficultatibus victis utilitatem iuvandi praetulerint gratiae placendi, idque iam et in aliis operibus ipse feci" "Indeed I feel that the proper purpose is in the works of those who overcame the difficulties and put the usage of helping before the favor of pleasing. I myself have already done this in other works."[106] Between these two branches, Pliny idealizes utilitarian *studia* over the entertaining, prefacing his later maxim, "deus est mortali iuvare mortalem" "the divine is that a mortal helps a mortal."[107] He claims that the *Naturalis Historia* is such a text, warning Titus "neque admittunt … iucunda dictu aut legentibus blanda. Sterilis materia, rerum natura, hoc est vita, narratur" "the books do not allow … things pleasant to discuss or entertaining for readers. A barren subject, the nature of things, that is life, is discussed."[108] This translation of the passage is not the first to recognize the disparity between *enkuklios paideia* and the contents of the *Naturalis Historia*. It does, however, support

[104] Pliny, *HN praef.* 15
[105] Ib.
[106] Ib. *praef.* 16
[107] Ib. 2.18.
[108] Ib. *praef.* 12

the text as found in all the major manuscripts, and it better contextualizes Pliny's remarks about *studia* and his text within the wider section discussing the production of intellectual literature.

The *artes* do not define Pliny's work. *Natura* and all it encompasses is his focus. It is the first work, or at least so he claims, to synthesize such an extensive collection of material. The categorizing of Varro's *Disciplinarum libri* and Celsus' *Artes* with the *Naturalis Historia* as encyclopedias is the result of a conflation of generic terminology. The association with Cato's *ad filium* is the outcome of a gross mischaracterization of the censor's text. Varro and Celsus produced what could be called "Roman encyclopedias" as reflecting *enkuklios paideia*, while Pliny, aware of this branch of knowledge, compiled a text more reminiscent of our encyclopedias. This anachronistic pairing of terminology resulted in an association which is not reflective of the texts and established an ancient genre not represented in Roman literature. Pliny's mention of *enkuklios paideia* is within a broader discussion on the production of intellectual literature, to which he adds his ideal of utilitarian texts. Neither Cato, Varro, Celsus, nor Pliny envisioned their work as an encyclopedia. Nevertheless, we will see that Pliny's work is distinctly Roman.

Chapter 2: Imperialistic Geography and Ethnography

In the previous chapter, I demonstrated that neither Pliny nor his contemporary audience considered the *Naturalis Historia* an encyclopedia. Similarly, the text does not reflect *enkuklios paideia*. Instead, Pliny's reference to this general learning is part of a discussion on literary intellectual pursuits. According to Pliny, the two principal branches, pursuits of pleasure and primary education, have respectively suffered from perplexing over-attention and a lack of interest. However, this last chapter's work is negative and asks, "so what is the *Naturalis Historia*?" I will address this question in the remainder of this thesis. Along with "encyclopedia" scholars have recognized other generic aspects of the text. This chapter will first discuss other generic attributes in the text most thoroughly discussed by scholars: geography and ethnography. This chapter will note how this material contributes to a Roman imperialistic project in the text. This interpretation connects to the text's cataloging structure and Romanocentric perspective. These various qualities reflect the essential generic variability of the *Naturalis Historia*. This one text cites the technical writings of Celsus and Varro, the philosophical treatises of Aristotle and Posidonius, the poems of Homer and Virgil, the *Annales* of Cornelius Piso, and the Roman state's official *annales*, *acta*, and *senatus consulta*. Pliny is omnivorous in his *auctores*, and his wide net grants the *Naturalis Historia* a variegated nature. It is a work as diverse in generic attributes as its origins.

Geography, the *Periplus*, and the Hours in a Day

Books 3 to 6 are geographical. They list the various regions, natural geographic features (e.g. mountain ranges, bodies of water), measurements and distances, cities, settlements, and nations of the Roman world and just beyond. Books 3 and 4 detail Europe, while 5 and 6 cover northern

Africa and Asia Minor. As a result, the books are more chorographic than geographic.[1] Portions of these books can be notoriously plain, as one meets long lists of names with no further description. Pliny acknowledges that this is intentional.[2] Such a simple presentation makes the books appear like a Roman itinerary. However, the journey taken by Pliny's geography relies more on waterways, following coastlines as well as rivers. Book 3 begins at the Straits of Gibraltar, and heads east along the northern Mediterranean shore until arriving in the Black Sea. From there, the text heads northwest along the rivers until setting sail in the North Sea, finally traveling back south to where the journey began. Book 5 begins again from the Straits of Gibraltar and instead travels along the southern shore of the Mediterranean until reaching Asia Minor. The text then heads north and afterward east to India, before heading south and returning to Africa through the Indian Ocean and the Red Sea. This travel structure makes the geographical portion of the *Naturalis Historia* a *periplus*, creating a voyage for each pair of books.[3] There are many precursors to such a text. Hecataeus of Miletus had already written one in the 6th-century BCE. Strabo too uses this structure.[4] Pomponius Mela's *De Chorographia*, the only other surviving Latin text on geography and a source in the *Naturalis Historia*, is also a *periplus*.[5] Similarly, Pliny identifies Posidonius'

[1] C. Nicolet, *Space, Geography, and Politics in the Early Roman Empire* (1991): 171-2

[2] Pliny, *HN* 3.2: "locorum nuda nomina et quanta dabitur brevitate ponentur, claritate causisque dilates in suas partes; nunc enim sermo de toto est. quare sic accipi velim ut si vidua fama sua nomina, qualia fuere primordio ante ullas res gestas, nuncupentur et sit quaedam in his nomenclatura quidem, sed mundi rerumque naturae."
"The names of places will be set bare and with as much brevity as will be granted, while their reputation and its causes have been carried to their own sections. For now the discussion is about the whole thing. Therefore, I would like it to be accepted so that if names are mentioned deprived of their fame, as they were in the beginning before any accomplishments, and indeed may be merely a catalog in these, but it is one of the world and nature of things."

[3] Doody, *Pliny's Encyclopedia: The Reception of the Natural History* (2010): 65; K. Sallmann, *Geographie des älteren Plinius in ihrem Verhältnis zu Varro* (1971): 232-6; Müller, *Geschicte der Antiken Ethnographie* ii (1980): 142-3; Murphy, *Pliny the Elder's* Natural History (2004): 135. Sallman also provides maps of the paths: one general (104): the other more precise (212).

[4] Clarke, *Between History and Geography: Hellenistic Constructions of the Roman World* (1999): 202-9

[5] K. Sallman, *Geographie des älteren Plinius in ihrem Verhältnis zu Varro* (1971): 220ff. Although Nicolet notes that neither are strictly *peripli* since they deal with interior towns (*Space, Geography, and Politics in the Early Roman Empire* (1991): 174. Contrarily Clarke considers Strabo's text organized like a *periplus* even if it occasionally ventures on land only to return to the water (*Between History and Geography* (1999): 206-9).

periplus as a source for book 5.[6] Thus, I think the *periplus* model is something Pliny inherits from his sources.

The *Naturalis Historia*, however, also uses geographic sources which were distinctly not *peripli*. Eratosthenes features among the list of *auctores* for books 2 and 4-6; Hipparchus for books 2, 5 and 6.[7] Their geographic treatises were not *peripli* but mathematical works, which provided geographic measurements, established lines of parallels, and calculated the Earth's circumference.[8] These matters all find their place in the 'astronomical' book 2.[9] These treatises must have provided Pliny with the various distances and land measurements in the *Naturalis Historia*.[10] At the end of the geographical books, Pliny again introduces the theory of parallels as "unam Graecae inventionis sententiam vel exquisitissimae subtilitatis" "one theory of Greek discovery or most excellent subtlety."[11] Pliny names two reasons for detailing the parallels. The first is "ut nihil desit in spectando terrarum situ" "so that nothing is lacking in the viewing of the world's placement."[12] The second is so that one may know the relationship between hours of daylight and shadow lengths

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[6] Pliny, *HN* 1.5
[7] Ib. 1.2, 4-6
[8] C. Nicolet, *Space, Geography, and Politics in the Early Roman Empire* (1991): 60-2; K.Clarke, *Between History and Geography: Hellenistic Constructions of the Roman World* (1999): 141. Berger assembled the fragments of Eratosthenes: *Die geographischen Fragmente des Eratosthenes* (1880). Bentham's unpublished PhD thesis "The Fragments of Eratosthenes of Cyrene" is more recent, but difficult to obtain (1948). Those of Hipparchus by Dicks: *The Geographical Fragments of Hipparchus* (1960). Clarke notes well that such mathematical geographies were not "purely mathematical" since they still relied on the testimony of travelers for the data necessary for their calculations (142-3). Nicolet proposes Agrippa also used data from professional travelers, such as sailors or soldiers (C. Nicolet, *Space, Geography, and Politics in the Early Roman Empire* (1991):110).
[9] Varying daytimes, noontime shadows, day lengths, and climactic zones are discussed 2.181-7. Dimensions of the Earth 2.242-8.
[10] Another prominent source for these is the *commentarii* of Agrippa, listed and commonly cited for measurements in all the geographic books. These served as the guide for the map of the Roman Empire erected in the Porticus Vipsania. Agrippa's sister, Polla, began its construction and Augustus completed it (Pliny, *HN* 3.17). See Nicolet's analysis of the *commentarii* and map's history proposing possible contents and appearance (*Space, Geography, and Politics in the Early Roman Empire* (1991): 95-114). Cf. K. Sallman, *Geographie des älteren Plinius in ihrem Verhältnis zu Varro* (1971): 91-5.
[11] Pliny, *HN* 6.206-220. The quote comes from 211 on the introduction of parallels. As we will see, Pliny is dismissive in his treatment on the theories of parallels, but nevertheless praises them as the product of "exquisitissmae subtilitatis".
[12] Pliny, *HN* 6.211

between regions. The same purpose is given in the section's title in book 1, "digestio terrarum in parallelos et umbras pares" "division of the world into parallels and equal shadows."[13] Indeed, Pliny seems to include the theories of parallels for the sake of completion. The introduction to this theory begins "his addemus etiamnum" "to these we will also add," and concludes "ergo reddetur hoc etiam" "therefore this also will be reported."[14] The parallels become an endnote to the geography, a final addition reflected in *addere* and the repeated *etiam*. The theory of parallels was grounded on solar and astral triangulation and allowed the calculation of large-scale distances. Pliny seems to undermine this branch of knowledge; despite that, he uses one of its significant benefits. He has reduced calculating the world to a geographical endnote about measuring day length and a gnomon's shadow at noon.

Such a mundane application of this theory is related to these books' preference for the *periplus* model. The *periplus* is a journey. One moves through various regions to the next, occasionally learning the distances one must travel. The result is a more terrestrial vision of geography. It presents a world as moved through rather than a distant airborne perspective which captures the landscape collectively, i.e. a modern map.[15] This is the difference between a hodological approach and a cartographic one.[16] Such a hodological approach focuses on the *oikoumene*, which for Pliny amounts to little more than the Roman Empire. Murphy, Naas, and Nicolet discuss the imperialism and Romanocentrism of Pliny's geography.[17] Towards the end of book 2 Pliny introduces the section detailing the measurements of the *oikoumene* with "Pars nostra

[13] Ib. 1.6
[14] Ib. 6.211
[15] A modern comparison is the difference between Google Maps/Earth and its Street View.
[16] P. Janni, *La Mappa e il periplo. Cartografia antica e spazio odologico* (1984)
[17] V. Naas, *Le Projet encylopédique de Pline làncien* (2002): 205, 422-5; C. Nicolet, *Space, Geography, and Politics in the Early Roman Empire* (1991): T. Murphy, *Pliny the Elder's* Natural History (2004): 131-2, 164:

terrarum, de qua memoro" "Our part of the lands, about which I speak."[18] Here the scope is immediately set. The *Naturalis Historia* is only concerned with "our" world, the Roman one.

This limitation soon makes the *oikoumene* of the *Naturalis Historia* the only land in the world. In book 6 Pliny calculates the continents' areas.[19] The section concludes with calculating what fraction of *tota terra* each continent makes. The total of the fractions (Europe: $\frac{1}{3}+\frac{1}{8}$; Asia $\frac{1}{4}+\frac{1}{14}$; and Africa: $\frac{1}{5}+\frac{1}{60}$) roughly equals one, indicating that these three continents are the total land on Earth.[20] Pliny was aware of Eratosthenes' calculations of the Earth's circumference of 252,000 *stadia*, which he calculates to 31,500 Roman miles (46,620 km).[21] He also cites Hipparchus' calculation, which increased Eratosthenes' by 26,000 *stadia* to a total of 278,000 *stadia*. He concludes with a wondrous story of a Dionysodorus who sent a letter to the surface from the Earth's bottom, indicating the distance was 42,000 *stadia.*[22] With this value as the radius, Dionysodorus' measurement supports Eratosthenes. Pliny then calculates that *terra* makes up only $\frac{1}{96}$ of the world. Such a disparity between the size of the Earth's sphere and the *oikoumene* resulted in a sense of insularity.[23] Crates of Mallos (ca. 168/159 BCE) had proposed that there were three other, inaccessible *oikoumene*: the *perioikoi*, the *antoikoi*, and *antipodes*.[24] Crates is named as a source for books 4 and 7 in the list of *auctores*. In book 4 he is cited for an etymology for Crete.[25] In book 7 he is the source for wondrous races of men.[26] However, Pliny demonstrates some

[18] Pliny, *HN* 2.242
[19] Ib. 6.206-11
[20] Europe: $^{11}/_{24}$; Asia: $^{9}/_{28}$; Africa: $^{13}/_{60}$. To total: $^{77}/_{168} + {}^{54}/_{168} + {}^{13}/_{60} = {}^{131}/_{168} + {}^{13}/_{60} = {}^{655}/_{840} + {}^{182}/_{840} = {}^{837}/_{855} = 0.996 \approx 1$. Pliny's use of mixed fractions results in the total not exactly equaling one.
[21] Ib. 2.247; cf. 6.171; Although if using the Egyptian *stadium* (157.5m): it equals 39,690 km, 385km off the correct value (C. Nicolet, *Space, Geography, and Politics in the Early Roman Empire* (1991): 60).
[22] Pliny, *HN* 2.248
[23] C. Nicolet, *Space, Geography, and Politics in the Early Roman Empire* (1991): 63
[24] Strabo 1.4.6: 2.5.13; P. Forbes, R. Browning, N. Wilson "Crates (3)" (2012)
[25] Pliny, *HN* 58
[26] Ib. 7.13, 28, 31

familiarity with Crates and refers to another *oikoumene*. In book 2, which as noted above includes material of more theoretical geography, Pliny discusses the presence of another inhabitable portion of Earth,

> media vero terrarum, qua solis orbita est, exusta flammis et cremata comminus vapore torretur. circa duae tantum inter exustam et rigentes temperantur, eaeque ipsae inter se non perviae propter incendium sideris. Ita terrae tres partes abstulit caelum.
>
> However, the middle of the earth, where the Sun orbits, is torrid, consumed in flames, and burnt by its close heat. There are only two temperate zones between the torrid and frigid regions, and they are not accessible to each other because of the Sun's heat. Thus, the sky has taken way three parts of the land.[27]

While not Crates' four, Pliny notes the existence of another *oikoumene* on the southern side of the sun-scorched region. This area is inaccessible because of the intermediate region's excessive heat. Hence, Pliny specifies his subject as "pars nostra terrarum" because there are two parts which are not "ours": the sun-scorched region which sustains no life, and the inaccessible southern temperate zone. Since this other region is not *pervia*, Pliny does not include it. As a *periplus,* the text cannot journey there. Nor can Pliny say much say about this other *oikoumene*, since no one has traveled there to detail its inhabitants or landscape. The text becomes limited to the traversable, and thereby known, world for books 3-6. *Nostra* becomes *tota*, because the world where the Romans can go is the only one that matters.[28]

The *periplus* journey moves from port to port, town to town. There are no settlements nor roads in an uninhabited region. This focus on the inhabited world is suited to Roman preferences for practical knowledge.[29] Suitably, Pliny disdains hypotheses about countless inaccessible

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[27] Ib. 2.172-3

[28] At the beginning of book 3 Pliny says Africa, Asia, and Europe make up "terrarum orbis universus" "the whole sphere of lands" (3.3). Later while asking forgiveness from his readers for forgiveness in his hasty treatment of Italy, he claims that he does so "ad singula toto orbe edissertanda" "to explain all things in the whole world" (3.42).

[29] A. Astin, *Cato the Censor* (1978): 332-40; M. Beagon, *Roman Nature: the thought of Pliny the Elder* (1992): 12

worlds.[30] Paired with this are Roman practical "geographies," which facilitate travel (i.e. itineraries) or record the land's centuriation.[31] As noted in the previous chapter, Pliny idealizes texts concerned with *utilitas*.[32] Another service of a geography is political, as if a guide for rulers.[33] The dedication to Titus and Pliny's limitation of his geography to the Roman world suggest such a purpose for the *Naturalis Historia*. Similarly, Murphy has noted that Pliny's frequent use of rivers and mountains as defining landmarks in books 3-6 evokes the imagery of Roman triumphs. Thus, such a catalog is a list of Rome's imperial acquisitions serving a similar educational and propagandistic purpose as the geographic displays in the triumph.[34]

Theoretical geographical texts, like those of Eratosthenes and Hipparchus, focus on physical dimensions of landmasses and the entire Earth rather than the towns and ports which dot the landscape. They are inhuman geography.[35] These mathematical treatises nevertheless contribute to practical geography through their land measurements. Thus, Pliny adopts these throughout books 3-6. The theory of parallels itself, however, provides little practical application for one concerned with an inhabited world other than accounting for varying hours of daylight and shadow lengths. The latter would inform one of the primary if journeying in an unfamiliar region. Pliny refers to the use of traveler sundials along with the parallels.[36] Perhaps familiarity with hours

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[30] Pliny, *HN* 2.3-4
[31] C. Nicolet, *Space, Geography, and Politics in the Early Roman Empire* (1991): 72
[32] Pliny, *HN praef.* 16
[33] C. Nicolet, *Space, Geography, and Politics in the Early Roman Empire* (1991): 73
[34] T. Murphy, *Pliny the Elder's* Natural History (2004): 154-60
[35] Strabo similarly stresses human geography. He criticizes Eratosthenes for his portioning of the world in comparison to amputation (2.1.30). He states that Eratosthenes' divisions by section (*kata meros*) are inferior to those limb by limb (*kata melos*). He reasons through the latter "τὸ γὰρ σημειῶδες καὶ τὸ εὐπεριόριστον ἐκεῖθεν λαβεῖν ἔστιν, οὗ χρείαν ἔχει ὁ γεωγράφος" "then is the taking of the limb marked and well-defined, which is necessary for the geography." Strabo explains that in geography these limbs are rivers, mountains, seas, *ethna*, size/proportions, and shape. The mention of *ethna*, tribes, notes a necessary human aspect to geography for Strabo (K. Clarke, *Between History and Geography*, 28). Indeed, he later stresses that beyond the *oikoumene* is not the geographer's concern (Strabo 2.5.34; 2.5.5). Strabo went a step further than Pliny and even omitted geographic distances (Ib. 207). Despite the similarities of the two authors' philosophies in geography, Strabo does not appear among the *auctores.*
[36] Pliny, *HN* 2.182

in the day would prove useful for a commander to avoid arranging a battle shortly before an early sunset or assigning too few watches for a long night. In a world without electric lighting, knowledge of the available daytime must have been useful to most. Therefore, Pliny dispenses with the more theoretical aspects of these geographies for books 3-6 while reaping the practical and mundane results: land measurements and different day lengths.

Pliny's geography, however, is not particularly applicable to travel. The text rarely provides distances between settlements or precise directions.[37] Instead, the books typically name a region, its towns and cities, inhabitants, natural features, and some measurements of the total region and bodies of water. The result is material which could be formulated as tables. If one did try to travel with the geographic books, they would likely soon be lost. The text sometimes provides cardinal directions, but relative terms such as *proximus*, *introrsus*, *intus,* and *adversus* are more frequent.[38] These directional cues rely on a single point of reference.[39] If one intended to journey from a different starting point, they would need to mentally construct together the directional cues to determine the proper path to take. Such a drawback stems from the *periplus* structure. Thus, if one traveled from Rome to Britain using books 3 and 4, they would follow a meandering course to arrive there, journeying east through Greece to the Black Sea and then rounding back through Scythia and Germany.[40] Sallman has noted that reversing Pliny's course is difficult, so there is little use in the *Naturalis Historia* for the traveler from Asia Minor or Africa

[37] Distances provided typically occur in Roman miles, but Pliny will use other measurements as well, including days to travel (5.50, 52).
[38]E.g. *proximus*: 3.19, 4.67, 119, 5.17; *introrsus* 4.101, 106, 6.118; *intus* 3.105; 4.111; *adversus*: 3.100. These terms are usually in relation to river banks or shorelines, further stressing the journey of the text through water.
[39] Occasionally Pliny provides multiple points of reference, e.g. the island of Samothrace's distances from Embro, Stalimene, and the coast of Thrace (4.73). He also sometimes uses "iunguntur" to attach multiple points, creating a network of paths (e.g. 3.98, 146, 4.3, 5.65, 6.60).
[40] Such a journey moves through 3.65-4.102

to journey west.[41] It has been questioned whether Pliny and Mela used a map to produce their *peripli* precisely because they do not allow one to easily visualize the cartography of their world.[42] Pliny had access to Agrippa's "map" in the Porticus Vipsania.[43] However, how feasible was it for Pliny to easily consult an immobile monument?[44] Furthermore, ancient geography is overall more textual than visual, and there is little evidence for common map literacy.[45] Overall, the *Naturalis Historia* is not especially practical as a guide for travel. Indeed, journeying with the text creates a comical image. The work's 37 scrolls are a large burden for one's journey. One could limit themselves to the geographical books, reducing the count to four. Then, however, one would deprive themselves of most of the information regarding an area scattered throughout the other books. One with a large retinue, such as a provincial magistrate or commander, could more easily move such a collection of papyrus. It seems that if the books of the *Naturalis Historia* were consulted for travel, it was prior to making the journey. There were other guides to aid one while journeying, e.g. itineraries.[46]

Pliny's information, on his own admission, is a bare list with an occasional short digression. It is a *nomenclatura*, not a map. Such a catalog is more useful for knowing what regions, towns, islands, seas, rivers, etc. exist(ed) than precisely where they are/were or how to get there.[47] It provides a meandering tour through the Roman Empire. Similarly Roman, the books eschew more

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[41] K. Sallman, *Geographie des älteren Plinius in ihrem Verhältnis zu Varro* (1971): 234
[42] Ib.
[43] Ib. 91
[44] Possibly he had a smaller illustration made, or more simply he restricted his reliance to the *commentarii*.
[45] T. Murphy, *Pliny the Elder's* Natural History (2004): 130-1; N. Purcell, *The Early Roman Empire in the West* (1990): 8; see also C. Nicolet, *Space, Geography, and Politics in the Early Roman Empire* (1991): 72 on maps used in schools
[46] Recent lectures by Greg Woolf at the University of Victoria also suggest that far movement was not common among those not required to do so professionally in the Roman Empire. Although "travel" literature, like most, was aimed at an elite audience more able to journey, but their geographical interests could have stemmed more simply from connoisseurship to display at dinner gatherings (cf. E. Lao, ""Luxury and the Creation of a Good Consumer.").
[47] Pliny also records towns which no longer exist (1.3).

theoretical material about the world beyond the *oikoumene*, having definitively limited its perspective at the end of book 2. This information of the *Naturalis Historia* could prove useful for one needing some geographic knowledge about the Empire, but an itinerary more efficiently provided routes. Lastly, the geographical books allow a reader to situate the material in the remaining 32 books of the text. However, as we will see, merely recording such information is in itself *utilis*.

Ethnography

Such an emphasis on the *oikoumene* in the geographical books presents a world filled with different peoples. Pliny's structure of the *nomenclatura* admits few spaces for digressions; however, this practice of cataloguing notably diminishes in the latter two books. Doody has noted that Pliny's unwillingness to use foreign (i.e. non-Latin and non-Greek) terms prevents the use of lists in the African and Asian books, forcing the narrative structure to become more descriptive and digressive than the previous books.[48] Nevertheless, the earlier two books also possess their tangents. Since the geography focuses on the *oikumene* such tangents inherently include ethnography. In book 4 Pliny describes the cannibalistic Scythians and mystical Hyperboreans.[49] In book 5 he discusses the Essenes, a morose people who live near the Dead Sea.[50] The reclusive Seres and luxurious Taprobaneans appear in book 6.[51] The text does not confine such ethnographies to the geographical books. Book 7 features a lengthy section on wondrous races of men, e.g. the cyclopean Arimaspi of the far North, the Psylli of Africa (men born with blood poisonous to snakes), Gymnosophists (naked wise men of India who stand all day staring at the sun), and the Choromandae (a hairy,

[48] Doody, "The Science and Aesthetics of Names in the *Natural History*" (2011): 127
[49] Pliny, *HN* 4.89-91 (Hyperboreans)
[50] Ib. 5.55 (Seres): 73 (Taprobaneans)
[51] Ib. 6.89-91

dog-teethed race of India).[52] Book 12 describes the Minaeans, the sole producers of frankincense.[53] In book 16 Pliny describes the German Chauci.[54]

The *Naturalis Historia*, however, features less ethnographic material than Strabo's *Geography*, nor are the ethnographies as focused in scope as those of Herodotus.[55] Shaw attributed this to a declining concern for the "barbarian" in the Flavian period.[56] Indeed, Pliny's ethnographies are not as focused or lengthy as some of his predecessors, but they dot the entire text. The treatment of "savage" tribes extends for 22 sections of book 7, demonstrating some focus as the first topic following the book's introduction. Pliny's ethnographies in this catalog are cursory, but such hasty treatments prevail throughout the *Naturalis Historia*.[57] Indeed, the descriptions of such odd tribes suit the contemporary elite's enthusiasm for *mirabilia*, as exhibited in Pliny the Younger's letters and the paradoxography of Mucianus, a prominent source in the *Naturalis Historia*.[58]

Murphy argues that these ethnographies in the *Naturalis Historia* perform three tasks: they portray the limits of human geography, fabulous forms of the human body, and/or non-Roman economic behavior in contrast.[59] Thus, the savage races of book 7 render the edges of the earth chaotic, while entertaining the reader.[60] The ethnography of the Mineans demonstrates that frankincense has no intrinsic value, but only gains it through travel expenses.[61] Taprobane is an

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[52] Ib. 7.9-32; Arimaspi: 10; Psylli: 14; Gymnosophists: 22; Choromandae: 24
[53] Ib. 12.51-65
[54] Ib. 16.2-4
[55] T. Murphy, *Pliny the Elder's* Natural History (2004): 87
[56] B. Shaw, "Rebels and Outsiders" (2000): 374
[57] Murphy remarks that the grammatical confusion that often occurs in Pliny results from a seeming urgency in the texts composition (*Pliny the Elder's* Natural History (2004): 35).
[58] T. Murphy, *Pliny the Elder's* Natural History (2004): 57; V. Naas, "Imperialism, *Mirabilia* and Knowledge: Some Paradoxes in the *Naturalis Historia*" (2011): 67
[59] T. Murphy, *Pliny the Elder's* Natural History (2004): 95
[60] Ib. 92
[61] Ib. 100

exaggeration of Roman luxury, with both nations contrasted to the assiduously non-luxurious Seres.[62] The Hyperboreans and Essenes are contrasted through similarity. Both occupy places where humans should not, beyond the North wind and along the Dead Sea respectively, and both die voluntarily. The Hyperboreans, however, live in a Utopia and are praised by Pliny while he harshly criticizes the Essenes for their sterility. Furthermore, the Hyperboreans provide Pliny with an opportunity to praise senatorial suicide without direct political reference.[63] Murphy argues that the difference in attitude between the Essenes and Hyperboreans results from the Essenes existing within the Roman world. They could interact with the wider world, but instead choose only to collect members apathetic towards life. Meanwhile the Hyperboreans live beyond the edges of the world. They are completely isolated, and so cannot associate with other societies.[64]

For Murphy, the Chauci tribes play a similar role. Pliny's treatment notably differs from other historians. They describe the Chauci as a tall and bellicose people who inhabit a difficult-to-access region in northern Germany between the Amisia and Albis rivers.[65] In *Germania* Tacitus calls them "populus inter Germanos nobilissimus" "the most noble people among the Germans."[66] Their relationship with Rome was combative. After an aborted attempt by Drusus in 12 BCE, they joined the Empire in 5 CE through Tiberius' efforts.[67] They were again at war with Rome by 41 CE.[68] Corbulo attempted to regain control of the territory but failed.[69] The Chauci then supported Civilis in the revolt of 69-70 CE.[70] Pliny's treatment is more derogatory than our other sources on

[62] Ib.
[63] Ib. 121-3; M. Beagon, *Roman Nature: the thought of Pliny the Elder* (1992): 239
[64] T. Murphy, *Pliny the Elder's* Natural History (2004): 127
[65] Ib. 166-7
[66] Tacitus, *Germ*. 35
[67] Dio 54.32; Velleius Paterculus 2.106
[68] Dio 68.8.7; Suetonius, *Claud.* 24
[69] Tacitus, *Ann*. 11.18
[70] Tacitus, *Hist.* 5.19

the Chauci. His Chauci are a wretched group. They inhabit an area on the edge of the Ocean, which twice daily sweeps in and floods their surroundings. The result is that they live without any agriculture, on raised hills and mounds, drink rainwater, and eat fish cooked on fires fueled by dried moss.[71] As Pliny notes, he had seen the Chauci while serving under Corbulo in Germania Inferior in 47 BCE.[72] His information, however, directly counters archaeological results.[73] This suggests that his account is fictional. Murphy argues that Pliny's characterization of the Chauci as a people living on the edge of the world, in a place neither land nor ocean, inverts the central haven of Italy. They capture anxiety over the impermanence of possession, which Pliny then cursorily dismisses.[74]

Sallman, however, argues that the description of the Chauci represents the concept of a free Germania generally, and their miserable condition results from their rejection of Roman culture.[75] The Chauci live in such a barren place because they refuse to join the Empire. Sallman's analysis emphasizes an imperialistic perspective for this ethnography. Fear discusses a similar imperialistic perspective to the treatment of the Chauci, placing it in line with the notion of the "Roman's burden."[76] Fear presents this as analogous to the colonial concept of the "White man's burden," which justified European colonialism as a "civilizing" force. In this model, the Chauci exemplify

[71] Pliny, *HN* 16.2-4
[72] Norden, *Germaische Urgeschicte in Tacitus Germania* (1920): 209 n.1; K. Sallman, "Reserved for Eternal Punishment: The Elder Pliny's View of Free Germania (HN. 16.1-6)" (1987): 109; R. Syme, "Pliny the Procurator" (1969): 203
[73] K. Sallman, "Reserved for Eternal Punishment: The Elder Pliny's View of Free Germania (HN. 16.1-6)" (1987): 116
[74] T. Murphy, *Pliny the Elder's* Natural History (2004): 173-4
[75] K. Sallman, "Reserved for Eternal Punishment: The Elder Pliny's View of Free Germania (HN. 16.1-6)" (1987): 120
[76] A. Fear, "The Roman's Burden" (2011): 25-8;

a people who have not yet benefitted from such an expansion, and Pliny chooses them precisely because he observed their barbarism.[77]

The same imperialism informs Pliny's treatment of the Jews, or rather lack thereof. Although Pliny aims to include lost towns and tribes in his text, he does not name the Jews when he describes Judea in book 5, instead only describing the exceedingly ascetic Essenes.[78] The text only alludes to the destruction of Jerusalem. The city's name first appears in a general description of the region's districts, "Orinen, in qua fuere Hierosolyma longe clarissima urbium orientis non Iudaeae modo" "Orine [the Hill Country] in which region used to be Jerusalem the by far most renowned city of the East, not merely Judea."[79] This is the most thorough description the city receives; the text never specifies its previous structures and inhabitants. The region which it once occupied is now merely hills, defined by a plain geographic feature. The city is referenced again when Pliny names the cities near the Dead Sea, "prospicit eum ab oriente Arabia Nomadum, a meridie Machaerus, secunda quondam arx Iudaeae ab Hierosolymis" "Arabia of the Nomads faces it from the East, and from the south Machaerus, once the stronghold of Judea after Jerusalem."[80] The second time Jerusalem is a smoldering flame, "Infra hos Engada oppidum fuit, secundum ab Hierosolymis fertilitate palmetorumque nemoribus, nunc alterum bustum" "The town of Ein Gedi used to be south of these people, second to Jerusalem in the fertility of its palm trees and groves, now another pyre."[81] *Alterum* indicates that there must be an original pyre, suggesting that the other flame is Jerusalem. The city itself is only mentioned elliptically in these two quotes while Machaerus and Ein Gedi are the topics of discussion. The text misses the opportunity to praise the

[77] Ib. 27
[78] Pliny states he includes settlements no longer existing.
[79] Pliny, *HN* 5.70
[80] Ib. 5.72
[81] Ib. 5.73

recent Flavian triumph, which is odd considering the work's dedicatee is Titus, the very man who led the siege.[82] However, Jerusalem's near omission from the *Naturalis Historia* is well suited to Titus' program of its obliteration. Josephus reports Titus' decision to annihilate the city:

> κελεύει Καῖσαρ ἤδη τήν τε πόλιν ἅπασαν καὶ τὸν νεὼν κατασκάπτειν, πύργους μὲν ὅσοι τῶν ἄλλων ὑπερανειστήκεσαν καταλιπόντας, Φασάηλον Ἱππικὸν Μαριάμμην, τεῖχος δ᾽ ὅσον ἦν ἐξ ἑσπέρας τὴν πόλιν περιέχον, τοῦτο μέν, ὅπως εἴη τοῖς ὑπολειφθησομένοις φρουροῖς στρατόπεδον, τοὺς πύργους δέ, ἵνα τοῖς ἔπειτα σημαίνωσιν οἵας πόλεως καὶ τίνα τρόπον ὀχυρᾶς οὕτως ἐκράτησεν ἡ Ῥωμαίων ἀνδραγαθία. τὸν δ᾽ ἄλλον ἅπαντα τῆς πόλεως περίβολον οὕτως ἐξωμάλισαν οἱ κατασκάπτοντες, ὡς μηδεπώποτ᾽ οἰκηθῆναι πίστιν ἂν ἔτι παρασχεῖν τοῖς προσελθοῦσι.
>
> Caesar now ordered his men to raze the entire city and the temple to the ground, leaving the towers that stood over the others, the Phasaelus, Hippicus, and Mariamne, and the wall which surrounded the city on the west. This wall was to be a camp for the garrison to be left behind. The towers were to mark what kind of city and the kind of strength the Romans' bravery had conquered. Those razing the city to the ground so wiped away the entire rest of the city's wall, that to future visitors it presented the belief that it had never been inhabited.[83]

Following his victory against the Jewish forces, Titus went a step further. He aimed to raze the city and wipe nearly any trace from the Earth, leaving only the greatest towers as testimony to Roman might. The dedication on the Arch of Titus in the Circus Maximus uses similar language, "et urbem Hierusolymam omnibus ante se ducibus regibus aut frustra petitam aut omnino intemptatam delevit" "and he destroyed the city Jerusalem which previously all commanders had attacked in vain or never tried."[84] The use of *delere* notes precisely that Titus did not merely conquer the city, he obliterated it. Pliny attempts the same with its destruction in the *Naturalis Historia*, only leaving the trace that Jerusalem was once a glorious city somewhere in the hilly region of Judea, now merely a pile of ash left to scatter in the winds.[85] He condemns the Jewish

[82] That is not to say the text does not commemorate the Flavian victory elsewhere, e.g. 12.112-9
[83] Josephus, *BJ* 7.1.1-4
[84] *CIL* 6.944
[85] Pliny will also suggest later where part of these exceptional groves has gone in book 12 while discussing the balsam. Pliny explains that the Flavians brought the balsam back to Rome after the Jewish defeat where it now thrives and is a servant that plays tribute alongside the Jewish people (12.111-8). Cf. Manolaraki on Pliny's

capital to an even worse fate in the text: exclusion from posterity. As we will see below, the transfer of knowledge is a primary concern of the *Naturalis Historia*, and so this exclusion is significant.[86]

An Imperial Catalog

This emulation of the Flavian obliteration of Jerusalem pairs well with scholars' other observations of the *Naturalis Historia* following Flavian programs. A clear association between the text and the current *principes* is clear from the start.[87] The epistolary preface is addressed to Titus, "narrare constitui tibi, iucundissime imperator; sic enim haec tui praefatio, verissima, dum maximi consenescit in patre" "I have decided to narrate to you, most pleasant commander. Let this title be yours while the title of the "greatest" grows old in [your] father."[88] Pliny creates a pun in *praefatio*. He asks Titus both to accept the nickname, *iucundissimus*, as well as the very preface to the *Naturalis Historia* which forms the letter. Pliny also asks Titus to let the *Naturalis Historia* be his. Morello observes that by attaching the *summarium* to the letter Pliny makes the text's public dispersal Titus' responsibility.[89] Murphy argues that this dedication is the submission of nature's control to the emperor as the arbiter of knowledge of the natural world.[90] Pollard compares the imperialistic programs of the Flavian *Horrea Piperataria,* an exotic spice market, and the gardens in the *Templum Pacis* to the botanical books of the *Naturalis Historia*. She finds that all three

representation of the balsam as enforcing Roman primacy ("*Hebraei Liquores*: The Balsam of Judaea in Pliny's *Natural History*" (2015): 642-9)

[86] As we will see below, the transfer of knowledge is a primary concern of the *Naturalis Historia*.

[87] After the destruction of Jerusalem and the triumph at Rome in 71, Titus received the tribunician power and co-ruled together with his father Vespasian with both also possessing the power of censor ("Titus", *OCD*).

[88] Pliny, *HN praef.* 1; cf. R. Morello, "Pliny and the Encyclopedia Addressee" who provides a thorough analysis of Pliny's playful tone and irony in the preface, although Pliny's pun on *praefatio* goes unmentioned.

[89] R. Morello, R. Morello, "Pliny and the Encyclopedia Addressee" (2011): 163

[90] T. Murphy, *Pliny the Elder's 'Natural History': the Empire in the Encyclopedia* (2004): 197-205

testify Roman domination in the acquisition and display of foreign plant species.[91] Additionally, Vespasian took control of a Rome nearly bankrupted by the reign of Nero and the civil wars of 69 CE. The result was an intensive taxation to restore the *aerarium* and *fiscus*.[92] These financial programs had Suetonius attribute an excessive love of money to Vespasian.[93] Such similar financial concerns occur throughout the *Naturalis Historia*. The text often lists the proper prices of consumer goods, hoping to educate shoppers.[94] Pliny also delivers a diatribe against the number of Roman funds sailing to India.[95]

Following the civil wars of 69 CE, the Flavians established their rule by imitating Augustus' restoration of the Republic.[96] Thus, they used Augustan imagery in coinage.[97] Naas compares the *Naturalis Historia* to Augustus' *Res Gestae*, Agrippa's geographical *commentarii*, and the resulting map in the Porticus Vipsania. Nicolet examined how geography in the Augustan era became key to envisioning the Empire.[98] Naas concludes that Pliny produces a similar geography for the Flavians to portray a world richer and more complex than that of the Augustan era.[99] The epigraphical record suggests that there was little use of Augustus' eleven *regiones* of Italy until the Antonine period. Thus, Bispham reasons that Pliny's use of the *regiones* in book 3 is an intentional effort to associate Flavian Italy with Augustan Italy.[100] Bruère argues that Pliny's over-zealous criticisms of Vergil stem from Pliny's attempts to produce a new nationalistic text

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[91] E. Pollard, "Pliny's *Natural History* and the Flavian *Templum Pacis*: Botanical Imperialism in First-Century C.E. Rome" (2009): 326-8, 335. The presence of gardens in the *Templum Pacis* was first proposed by R.B. Lloyd ("Three Monumental Gardens on the Marble Plan," (1982))
[92] A. Launaro, "The Economic Impact of Flavian Rule" (2016): 197-9
[93] Suetonius, *Vesp*. 16
[94] E. Lao, "Luxury and the Creation of a Good Consumer," (2011): 45.
[95] Pliny, *HN* 6.106
[96] R. Mellor, "The New Aristocracy of Power" (2003): 80, 82
[97] J. Cody, "Conquerors and Conquered on Flavian Coins" (2002): 103; J. Williams, "Pliny, antiquarianism, and Roman imperial coinage," (2007): 179-80
[98] C. Nicolet, *Space, Geography, and Politics in the early Roman Empire* (1991): 7, 17, 20, 113
[99] V. Naas, *Le Projet encyclopédique de Pline l'àncien* (2002): 76, 416
[100] E. Bispham, "Pliny the Elder's Italy," (2007): 47

like the *Aeneid*.[101] If such is the case, perhaps this too stems from an attempt to echo the Augustan era.

More generally, the Roman perspective of the text suits the identification of the *Naturalis Historia* as a catalog of the Roman Empire and a project of Roman imperialism. Such analyses have spawned from comparisons of Pliny's encyclopedic project to the first editions of the *Encyclopedia Britannica* as a product of British Imperialism.[102] The preface establishes the text's accumulating nature,

> viginti milia rerum dignarum cura—quoniam, ut ait Domitius Piso, thesauros opertet esse, non libros—lectione voluminum circiter duorum milium, quorum pauca admodum studiosi attingunt propter secretum materiae, ex exquisitis auctoribus centum inclusimus triginta sex voluminibus.
>
> In 36 volumes I have included 20,000 things worthy of attention—since, as Domitius Piso says, treasuries are needed, not books—from 100 sought out authors with around 2000 volumes read, of which few learned men touch because of the concealment of the information."[103]

Pliny portrays his work as a collection by aligning it with Piso's appeal for treasuries. His repeated use of totals only further establishes such an inventorying aspect. Not only does he stress the

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[101] R.T. Bruère, ``Pliny the Elder and Virgil" (1956): 229-30. Bruère seems to overstate Pliny's hostility towards Vergil in the *Naturalis Historia*. When Pliny praises Vergil's description of a horse in the *Georgics* it comes with dismissal by Pliny referring to his description in *De Iaculatione Equestri Condito* (p. 231). Instead this could be Pliny equalizing their works, but he still grants primacy to Vergil. Even when Bruère admits that Pliny approves Vergil, he finds implicit "unflattering surprise" in the use of "video" (240). He treats nearly every instance Pliny cites or alludes to Vergil as a criticism of the poet. Most of the allusions and reference to Vergil in the *Naturalis Historia* are to the *Georgics*, where Pliny corrects the agricultural information. Perhaps the greater issue for Pliny was that readers had considered information in the *Georgics* factual. In one instance Pliny discusses the inconsistency of beliefs between the appearance of the *oestrus* in honeycombs and that bees shape their offspring in flowers (11.47). The *Georgics* claims the latter (Vergil, *Georg.* 4.200-1). Columella states that Vergil had given this belief authority (9.2.4). Both Pliny and Columella note that sowing beans in March was preferable to the Spring (Pliny, *HN* 18.120; Columella 2.10.9). The *Georgics* advised the latter, although only Pliny directly addresses Vergil as the source, "Virgil … iubet". Perhaps, like the story of bee offspring, Vergil had given authority to sowing beans in Spring, which both Pliny and Columella must counter. Of course, the debates between these authors was likely not of great importance to most experienced farmers, who had little time to read such works (Columella, 9.2.5).

[102] S. Carey, *Pliny's Catalogue of Culture, Art, and Empire in the 'Natural History'*" (2003): 17. T. Murphy, *Pliny the Elders 'Natural History'* (2004): 2; Doody discusses the potential flaws and concern of anachronism in the comparison (*Pliny's Encyclopedia: the reception of the* Natural History (2010): 59).

[103] Pliny, *HN praef.* 17

amount of material contained in the total volumes, but in book 1 he also totals the contents of each volume with the formula of "summa: res et historiae et observationes" "The total: things and inquiries and observations" followed by a number. The result is a census of the text's data. Pliny's informational treasury has a value of 20,000 with a ledger detailing how this data is split between each book.[104]

That the *Naturalis Historia* is for a Roman audience is clear from the first eight words, "Libros Naturalis Historiae, novicium Camenis Quiritium tuorum opus" "the books of *Naturalis Historia*, a new work for the Muses of your Quirities."[105] Pliny often mentions when certain animals and natural resources first appeared in Rome.[106] He lists his Roman *auctores* before naming the *externi*.[107] Prices in the text are distinctly Roman, despite the fact that Pliny acknowledges that they will vary by locale.[108] The text lends primacy to Rome, reflecting imperialistic sentiments. The city is called "terrarum caput" "head of the world."[109] Pliny grants similar titles to Italy. The Roman *patria* is both "victrix omnium" "conqueror of all" and "imperatrix" "commander."[110] The text portrays Roman authority and its expansion as beneficial to the wider world, "quis enim non communicato orbe terrarum maiestate Romani imperii profecisse vitam putet commercio rerum ac societate festae pacis, omniaque etiam quae occulta fuerant in promiscuo usu facta?" "For who does not think, since the whole world is in communication through the greatness of the Roman Empire, that life has benefitted from the

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[104] cf. Murphy discusses Pliny's similar use of financial metaphor with debt and interest accumulated for his sources (*Pliny the Elder's Natural History: the Empire in Encyclopedia* (2004): 59)
[105] Pliny, *HN praef.* 1. Quirites is an alternative name for the Roman citizens.
[106] Ib. 9.123 (pearls)
Cf. V. Naas, "Imperialism, *Mirabilia* and Knowledge: Some Paradoxes in the *Naturalis Historia*" (2011): 61
[107] Pliny, *HN* book 1
[108] V. Naas, *Le Projet encyclopédique de Pline l'ancien* (2002): 233
[109] Pliny, *HN* 3.38
[110] Ib. 13.18 and 26.18 respectively

exchange of things and partnership of solemn peace, and that all things which had been hidden have entered common use."[111] Through the spread of *imperium Romanum* the entire world not only enjoys peace, but also trade and useful discoveries. Book 3 contains a *laus Italiae* which captures the same benefit of imperialism,

> dicatur terra omnium terrarum alumna eadem et parens, numine deum electa quae caelum ipsum clarius faceret, sparsa congregaret imperia ritusque molliret et tot populorum discordes ferasque linguas sermonis commercio contraheret ad conloquia et humanitatem homini daret breviterque una cunctarum gentium in toto orbe patria fieret.
>
> The land is called both the nursling and parent of all lands, chosen by the will of the gods to make the sky itself brighter, unite scattered empires, soften customs, draw together through interaction so many peoples' different and wild languages in conversation, and to give culture to mankind. In short, it is chosen to become the one fatherland of all races in the whole world.[112]

Italy is the land chosen by the gods to unite the world and become the single *patria*. [113] Furthermore, Pliny's work directly benefits from Roman expansion,

> Immensa Romanae pacis maiestate non homines modo diversis inter se terris gentibusque, verum etiam montes et excedentia in nubes iuga partusque eorum et herbas quoque invicem ostentante! aeternum, quaeso, deorum sit munus istud! adeo Romanos velut alteram lucem dedisse rebus humanis videntur.

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[111] Ib. 14.2

[112] Pliny, *HN* 3.39

[113] Pliny's nearly synonymous language of Italy and Rome appears to be reflective of a less focused urban, and more generally Italian Roman perspective. Naas argues that exotica are frequently compared with those from Rome. She cites the example of large snakes found in India, which Pliny validates by those found in Italy and one killed on the Vatican Hill during the reign of Claudius (V. Naas, "Imperialism, *Mirabilia* and Knowledge: Some Paradoxes in the *Naturalis Historia*" (2011): 65; Pliny, *HN* 8.37). While Pliny does refer to a Roman example, his first is that such snakes are seen throughout Italy generally.

Indeed, Pliny was born over 100 years and writing over 150 years after the *Lex Julia* and *Lex Plautia Papriria* granted Italian towns Roman citizenship. Pliny himself was not from Rome, but was an Italian. His hometown, Comum in *Gallia Cisalpina*, became a *municipium* during the Empire, but *Gallia Cisalpina* had already become part of Roman Italy in 42 BCE. Before that Rome had colonized it twice in the 1st-century BCE, first after 89 BCE, and again by Julius Caesar in 59 BCE renaming it to *Novum Comum* ("Comum" *OCD*). It is listed as part of the Augustan *regio* XI, *Gallia Transpadana* (Pliny, *HN* 3.123-4). In Pliny's life Italy, which included his hometown, had been Roman. This history can also explain Pliny's comment that Italy was chosen by the gods "una cunctarum gentium in toto orbe patria fieret" "to become the one fatherland of all races in the whole world" (3.39). Italy may not originally have been considered Comum's *patria*, but certainly by the time of Pliny's birth, and likely his father's, this had become the case. He, in fact, refers to himself as a *Quiris* at the end of the *Naturalis Historia*. (37.205).

> Through the immeasurable greatness of Roman peace showing in turn not only peoples among themselves in diverse lands and peoples, but also mountains and ranges rising into the sky, their offspring, and plants! I pray that this gift of the gods be eternal! Indeed, they seem to have given the Romans as a second light to human affairs.[114]

The Roman empire has revealed all the world's contents and inhabitants, thereby enlightening the world. The *Naturalis Historia* is in debt to this revelation, since without the availability of this information it would have little to record.

Such an emphatic Roman perspective and glorification of the Empire's spread grants the work an imperialistic tone. Considering this, scholars argue that the text is a catalog particularly suited to inventorying the Empire's acquisitions. Conte calls the text a project of recording an organized Roman world at the end of an era.[115] Barchiesi considers that the listing of *mirabilia* as exotica from the edge of the world portrays Rome's control of the remote.[116] Naas similarly comments that Rome in the *Naturalis Historia* possesses so many *mirabilia*, it constitutes an *alius mundus*.[117] She further argues that Pliny purposely plays with the ambiguity of the terms *orbis terrarum* and *orbis Romanus* to affirm the Empire's universality.[118] As noted above, Fear finds that the text endorses a program of Romanization.[119] Thus, the *Naturalis Historia* is a Roman collection of data, a gathering supported by the process of Roman imperialistic expansion. However, this catalog is not meant to sit idly, but to be put to use.

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[114] Pliny, *HN* 27.2-3
[115] G. Conte, *Genres and Readers: Lucretius, love elegy, Pliny's encyclopedia* (1994)
[116] A. Barchiesi, "Centre and periphery" (2005): 402
[117] V. Naas, "Imperialism, *Mirabilia* and Knowledge: Some Paradoxes in the *Naturalis Historia*" (2011): 63; Pliny, *HN* 36.101
[118] V. Naas, *Le Projet encyclopédique de Pline l'àncien* (2002): 205, 419.
[119] A. Fear, "The Roman's Burden," (2011); cf. R. Evans on the Romanization of Britain in other Flavian literature, namely Tacitus' *Agricola* and Martial's *Epigrams* ("The Discourse of Flavian Rome" (2003): 266-9)

Chapter 3: A Useful Text

In the last chapter, I discussed aspects of geography and ethnography in the *Naturalis Historia*. Scholars have observed how these are central in the text's program of organizing the Roman world.[1] A Roman perspective is apparent throughout the text, and Pliny aligns his work's production with the *pax Romana* as a direct result of the benefits of Roman imperialism. In the following two chapters, I will analyze how Pliny makes his work *utilis* through selective and sequential reading. As we have seen, Pliny expresses a utilitarian ideal for literature, "Equidem ita sentio, peculiarem in studiis causam eorum esse, qui difficultatibus victis utilitatem iuvandi praetulerint gratiae placendi" "Indeed I feel that the proper purpose is in the works of those who have overcome the difficulties and put the usage of helping before the favor of pleasing."[2] I will analyze the text as a reference work in this chapter. The preface defines such a use for the text, reflective of Pliny's appeal to Piso's demand for treasuries.[3] I will then critically comment on Doody's recent analysis of the failures of the reference structure. As a result of these failures, she argues that the text encourages a sequential reading. I will argue that such a view of the flawed reference structure is too dismissive. In the next chapter, I will discuss sequential reading of the text as a starting point for the text as a Roman *historia*.

The Roman Reference

This identification of the *Naturalis Historia* as a catalog of the empire partially derives from its presentation and organization. The geographical books have few descriptions, hastily rushing through settlement names. Such fervent listing does decrease for the rest of the text, nearly every

[1] Pollard and Manolaraki have both recently provided examinations on how the use of botany also furthers a Roman imperialistic program (E. Pollard, "Poiny's *Natural History* and the Flavian *Templum Pacis*: Botanical Imperialism First-Century c.e. Rome" (2009); E. Manolaraki, "*Hebraei Liquores*: The Balsam of Judaea in Pliny's *Natural History*" (2015))
[2] Pliny, *HN praef.* 16
[3] Ib. *praef.* 17

topic receives some description, but the amount of attention paid to each still varies. For example, the elephant, which introduces book 8, has 35 chapters, while the squirrel (*sciurus*) receives only 34 words.[4] Such discrepancies in content derive from the material Pliny obtains from his *auctores*. Elephants had played a prominent part in Rome's history, especially in the battles with Carthage and Pyrrhus. Polybius alone has much to say about elephants and their incorporation in warfare.[5] Pigs, sheep, and cows necessarily receive more treatment because of the agricultural authors Pliny cites. Caro, Varro, Columella, and Mago all feature in the lists for book 8. Meanwhile, the *sciurus* garnered little attention. No surviving Greek and Roman authors predating Pliny mention the creature. Martial is the only other Roman author to name the *sciurus*.[6] As for Greek authors, only Oppian refers to the animal.[7] Aristotle has no interest in the fluffy "shadow tail." Furthermore, Pliny's *nomenclatura* never entirely disappears. The botanical books often name plants without description. Doody remarks that at times providing the name is informative enough for Pliny.[8]

This sharp division of content by topic allows one to read selectively, serving the reference function of the text. Pliny advises such use in the preface,

> Quia occupationibus tuis publico bono parcendum erat, quid singulis contineretur libris, huic epistulae subiunxi summaque cura, ne legendos eos haberes, operam dedi. tu per hoc et aliis praestabis ne perlegant, sed, ut quisque desiderabit aliquid, id tantum quaerat et sciat quo loco inveniat. hoc ante me fecit in litteris nostris Valerius Soranus in libris, quos ἐποπτίδων inscripsit.
>
> Since you must be spared in your affairs for the public good, with the greatest care I have joined to this letter what each single book contains so that you are not obliged to read them. On account of this, you will also present it to others, so that they do

[4] Ib. 8.1-35 (Elephant); 8.138 (Squirrel)
[5] Polybius, 1.33.6-34.8; 5.84.1-7, 16.18.7-19.11; Elephants play a part in many of the battles Polybius describes, having formed part of both the Carthaginian and Pyrrhus' army.
[6] Romans apparently considered the animal cute. In comparing to a beloved, Martial notes, "Cui conparatus indecens erat pavo,| Inamabilis sciurus et frequens phoenix" "Compared to whom the peacock was ugly, the squirrel odious, and the phoenix common" (Martial 5.37.12-3). Evidently the squirrel was typically *amabilis* just as the peacock was typically beautiful and the legendary phoenix rare.
[7] Oppian, *Cyn.* 2.586
[8] A. Doody, "The Science and Aesthetics of Names in the *Natural History*" (2011), 122

> not have to read through the books. Instead, as each person desires something, they will search this list and know where to find it. In Roman writing, Valerius Soranus did this before me in the books which he titled *Epoptides*.[9]

Not wanting Titus to devote too much of his valuable time to this large text, Pliny has added a list of contents to the letter, which now forms book 1. Its purpose is to create a reference function for the text. Do not, he advises, read these 37 books in order. That is far too cumbersome. Instead, dear reader, peruse book 1, find what you want, and make your way straight to the material.

Those familiar with modern reference works might become frustrated with Pliny's structure. The modern reference work typically uses alphabetical ordering, but this was not an immediate development. Pliny's own need to explain the use of book 1 in the preface suggests that his audience had few expectations of reference works, including alphabetical ordering. Later Medieval encyclopedias used a hierarchy established by Bartholomeus Anglicus in his *De proprietatibus rerum*: God, angels, the rational soul, humans, with the rest organized according to the four elements.[10] Alphabetical ordering was becoming standard in reference works in the 13th-century. Vincent de Beauvais, however, states that he began with an alphabetical ordering in the preface to his *Speculum maius*, but he deviated since it upset the actual order of nature.[11] The *Naturalis Historia* appears overall hierarchical. The text moves from the biggest to the small, the universe to stones.[12] Within the text, only book 27 and the second half of 37 have a rough alphabetical ordering. For the remainder, each book possesses its own system. The astronomy, book 2, moves from the heavens to the earth. The geographical books, as noted above, begin at the

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[9] Pliny, *HN praef.* 33
[10] M. Franklin-Brown, *Reading the World: Encyclopedic Writing in the Scholastic Age*, (2012), 81
[11] Ib. 99-100 As a result Franklin-Brown concludes that Vincent de Beauvais did not intend for his text to be a reference work but read sequentially. We shall see that Doody makes the same argument about the *Naturalis Historia*, and why this, at least for Pliny, is inaccurate.
[12] A. Doody, *Pliny's Encyclopedia: the Reception of the Natural History,* (2010), 27; J. Henderson, "The Nature of Man: Pliny, *Historia Naturalis* as Cosmogram" (2011), 154; V. Naas, *Le Projet encylopédique de Pline l'ancien* (2002), 200

Straits of Gibraltar, first making a broad counter-clockwise journey through Europe, and then an even wider loose clockwise journey through Africa and Asia Minor. The topic of human nature follows, and book 7 treats numerous fabulous races, prodigies, exceptional people, faculties of the mind, various arts, disease, death, and notable inventions. The first three zoological books begin with the three largest animals, elephant, whale, and ostrich for book 8, 9, and 10 respectively. The ordering for the following animals is less evident. Size does not govern the sequence of zoological topics, otherwise, surely the giraffe would precede the lion, and the porcupine would follow the bear.[13] Book 11 begins with the bee, and while a few other insects are quickly discussed, it quickly changes focus to comparing animal anatomy. The next books discuss plants by type, but the order within each book is seemingly arbitrary. Medicines typically follow the order of the corresponding books; that is, the first book on animal medicine has the same order as books 8-10. However, the remaining remedies soon become arbitrary lists. Animal medicines are further confused as remedies from single beasts are split between two books. The books of metals descend by value. The remaining text is subject to Pliny's discretion, such as a list of famous painters followed by a section on stopping birdsong.[14] In these final books, the medicinal properties of metals, pigments, rocks, and gems are all included in the original section rather than being relegated to their own respective book.

The result is that in book 1 the order appears arbitrary, but there is a logic within the text itself.[15] While hierarchy organizes some material, e.g. gold to silver to bronze, or the *periplus* controls the geographical books, various systems operate elsewhere. Names similar to other objects can group topics together, such as in the sections "fish whose names resemble land animals

[13] The giraffe is mentioned at 8.69 while discussion of the lion begins 8.41. The porcupine is discussed 8.125 and the bear in 8.126-32
[14] Pliny, *HN* 1.35
[15] A. Doody, *Pliny's Encyclopedia: the Reception of the Natural History,* (2010): 113

or objects," and "gems' names resembling parts of the body."[16] Similarly, one topic can lead to the next through similarities of name and appearance, e.g. the *camelopardus* (giraffe) following the camel.[17] Similarities can also introduce the next topic. Thus, the field mouse follows the bear because it also hibernates.[18] Alternatively, contrast introduces a topic, such as the massive serpents of India who are arch-nemesis to the elephant.[19] These capture the digressive nature of the text. One topic submits to the next not because of the alphabet but some other intrinsic link, be it through similarities, contrast, metaphor, or another association. Murphy argues that the text's "taste for the marvellous" fosters these digressions.[20] They portray an enthusiasm for *natura* which deviates from a simple systematic progression, with book 1 attempting to accommodate for this sporadic ordering.

Undoubtedly an almost religious zeal for nature is present throughout the text;[21] however, Pliny ordering through similarity and contrast also comes from his adherence to the Stoic theory of sympathy and antipathy.[22] Stoic doctrine held that the world possessed a cosmic order. Within that order, the interactions of objects and creatures of nature are either positive and beneficial (sympathy) or negative and detrimental (antipathy). Towards the end of the text Pliny proposes such a schema for nature, "Nunc quod totis voluminibus his docere conati sumus de discordia rerum concordiaque, quam antipathian Graeci vocavere ac sympathian" "I have tried to teach with these whole volumes about the discord and harmony of things, which the Greeks call antipathy

[16] Ib. 30; Pliny, *HN* 9.82 and 37.186 respectively
[17] Pliny, *HN* 8.67-8 (camel), 69 (giraffe)
[18] Ib. 8.132 "Conduntur hieme et Pontici mures" "The Black sea mouse too is hidden by the winter"
[19] First introduced in 8.32 and picked up again at 8.37
[20] T. Murphy, *Pliny the Elder's 'Natural History': the Empire in the Encyclopedia* (2004): 37-8
[21] M. Beagon, *Roman Nature: the thought of Pliny the Elder* (1992): 34ff
[22] G. Conte, *Genres and Readers: Lucretius, love elegy, Pliny's Encyclopedia* (1994): 93-4; A. Wallace-Hadrill, "Pliny the Elder and Man's Unnatural History" (1990): 84

and sympathy."[23] The use of this theory is apparent in certain passages, such as when Pliny notes that goat's blood shatters a diamond.[24] The use of similarities and differences to connect topics further unites nature into such a model. Elephants battle with serpents, mountains against rivers, while the mouse and bear enjoy a lovely winter's rest.

Reading Sequentially vs. Selectively

Doody argues that this variation in ordering results from the digressive mode as part of the text's aim to be entertaining as well as instructional.[25] This observation stems from the alternative, sequential method of reading the *Naturalis Historia*, which has recently garnered attention.[26] In her study of the *Naturalis Historia*' reception, Doody argues that the text endorses sequential reading over referencing.[27] She states that book 1 is not an especially useful reference guide. Identifications of book 1 as an index or table of contents are inaccurate and result from modifications of book 1 in later editions of the text.[28] As a result, Doody elects to call book 1 a *summarium*. Pliny himself provides no title for the letter's addendum. While book 1 lists contents according to the text's order like a table of contents, Pliny did not organize book 1 as a table. Instead, book 1 was prosaic like the rest of the work. This makes it more difficult to parse than a modern table of contents. The text's current index is alphabetical, allowing one to pinpoint mentions of certain topics without regard to the text's actual order. Johannes Caesarius', Petrus Vidoueus', and Erasmus' editions further divided the text by line for the indexes in their editions.[29]

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[23] Pliny, *HN* 37.59; See Holmes who argues that Pliny's use of antipathy and sympathy stems from its traditional application in natural history rather than from Stoic doctrine ("The Generous Text: Animal Intuition, Human Knowledge and Written Transmission in Pliny's Books in Medicine" (2017): 236-7)
[24] Ib. 37.59-60
[25] A. Doody, *Pliny's Encyclopedia: the Reception of the Natural History,* (2010): 26
[26] Ib. passim; J. Henderson, "The Nature of Man: Pliny, *Naturalis Historia* as Cosmogram" (2011): 139
[27] A. Doody, *Pliny's Encyclopedia: the Reception of the Natural History,* (2010): 124
[28] Ib. 97-101; 108-28.
[29] Ib. 120-2

Chapter headings and numbers are similarly later developments. Doody further observes that the *summaria* at the beginning of each book are a similar later, albeit early, development in the text's reproduction to accommodate the drawbacks of referencing in scrolls.[30]

To demonstrate the flaws of book 1 characterized as a reference tool, Doody attempts to use the *Naturalis Historia* to answer three questions: Who was Praxiteles? What are good cures for headaches? How is iron mined?[31] Book 1 does not mention Praxiteles. Finding him in the text, Doody notes, requires knowing that he was a renowned sculptor, resulting in consulting three sections on sculpture throughout books 34-36. Locating Praxiteles through book 1 requires the use of Johannes de Spira's edition, which lists the famous sculptors discussed in book 36 in the section "Qui primum laudati in marmore sculpendo et quibus temporibus" "Who first were praised for sculpting in marble and in what times."[32] A modern reader can simply use the index. Finding a headache treatment is especially difficult since book 1 primarily lists remedies by medicine rather than ailment. For the last query, the reader uses book 1 to find the section on iron in book 34. None of the entries particularly mention the metal's mining and furthermore, Doody notes, they lack any mention of the polemic against iron's use in weaponry which introduces the metal in the text.[33] When one reads further, the second section declares the method of mining with an uninformative "ratio eadem excoquendis venis" "the method of extracting from veins is the same."[34] Doody argues that *eadem* refers back to the description of mining bronze, "vena quo dictum est modo foditur ignique perficitur" "It has been said how it is dug from veins and purified with fire."[35] This is another reference backward, now to the lengthy description of mining gold in the previous

[30] Ib. 99-100
[31] Ib. 115ff
[32] Ib. 118
[33] Ib. 123
[34] Pliny, *HN* 1.142
[35] Ib. 34.2; A. Doody, *Pliny's Encyclopedia: the Reception of the Natural History,* (2010): 124

book.[36] Doody reasons that this illustrates that the text assumes that one has read the preceding material. She cites as another example Pliny's omission of pearls from book 37 since he has already discussed them in book 9.[37]

Doody does well to observe the flaws of book 1, resulting in two millennia of alterations to accommodate them. These drawbacks, however, do not demand that a sequential reading of the text is foremost. Pliny indicates that reference reading is still a novel concept in the need to explain book 1's purpose to Titus and his wider audience.[38] He has a single precursor for this tool, Valerius Soranus.[39] Perhaps one can forgive Pliny's imperfect attempt. When Pliny states that the method of mining iron "is the same," he may not be referring first to bronze, but metal generally. If a reader were to turn to the iron section and find this statement that the method of mining "is the same," he or she might then return to book 1 to find another relevant section. There is no indication of information on mining in the bronze and silver headings. If one then turns to the headings about gold, they will find "de inveniendo auro" "on finding/acquiring gold."[40] Here Pliny gives a thorough description of various mining and refining processes. It is true that the lack of pearls from book 37 is a frustrating omission for the volume on gems. Should a reader, however, instead immediately consult book 1 for pearls, they would find the heading "de margaritis" "about pearls" under book 9.[41] By immediately using book 1, he or she would never have gone to book 37 to discover pearls missing. Furthermore, Pliny's own reference back to the precise book only aids his reader, "Proximum apud nos Indicis Arabicisque margaritis pretium est, de quibus in nono diximus volumine inter res marinas" "The closest gem in value among us, the Indians, and Arabians are

[36] Pliny, *HN* 33.67-77
[37] Ib. 37.62 refers to 9.105-24
[38] Ib. *praef*. 33
[39] Ib.
[40] Ib. 1.33
[41] Ib. 1.9

pearls, about which I spoke in the ninth volume among things of the sea."[42] Pliny guides his reader to book 9 and justifies its placement as among *res marinae*. If a sequential reading is assumed, he could neglect locating the pearls' description earlier in the text. References backward indicate an expectation that readers have not read the previous material. Why else remind his reader of a topic's location? Pliny ruptures the sequence of the text precisely by referring backward. Rather than continuing to the next section in book 37, a reader inquisitive about pearls suddenly reverses 28 books.

References forward also occur in the *Naturalis Historia* and encourage breaking the text's standard sequence. In book 8 Pliny notes that no wolves, bears, or any poisonous animals live on Crete except for a species of poisonous spider. He, however, delays this discussion, "in araneis id genus dicemus suo loco" "we will discuss that group in its own place in 'spiders.'"[43] Spiders feature among the bugs of book 11, and so he redirects his reader to the section in book 1, "de araneis: qui ex iis texant; quae materiae natura ad texendum; generatio araneorum" "on spiders: those that weave; the nature of the web's material; the reproduction of spiders."[44] While naming different types of fleece, Pliny notes that black fleece cannot be dyed. He then states, "de reliquarum infectu suis locis dicemus in conchyliis maris aut herbarum natura" "we will discuss the dying of the rest at the proper places in 'marine shellfish' or 'the nature of herbs.'"[45] Pliny now points to two separate sections in the text on dying cloth. The first directs the reader to book 9 on sea creatures in which book 1 lists,

[42] Ib. 37.62
[43] Ib. 8.228
[44] Ib. 1.11
[45] Ib. 8.193

> Muricum natura: de purpuris; quae nationes purpurae; quomodo ex his lanae tinguantur; quando purpurae usus Romae, quando lati clavi et praetextae; de conchyliatis vestibus; de amethysto tinguendo; de Tyrio, de hysgino, de cocco.
>
> The nature of the murex: about purples; the origins of the purple; how wools are dyed from these; when the use of purple began at Rome; when the broad stripe and border began; about purple dyed clothes; about dying with amethyst; with Tyrian, with dark red, with scarlet.[46]

Book 1 does not list this section with same exact phrasing as "conchyliis" as it does for "de araneis;" however, *choncyliatus* identifies the section and dying is clearly its topic with the presence of *lana*, *vesta*, and the repetition of *tinguere* and *purpura*. It plainly informs the reader that this is the referenced section. The second reference points to book 22 "auctoritas herbarum" "the power of herbs."[47] One does not have to look far within the list of contents to find the section. Book 22's contents begin, "gentes herbis formae gratia uti; herbis infici vestes; item pigmento de oleo chortino" "that peoples use herbs for the sake of their appearance; clothes dyed with herbs; the same with the color from grass oil."[48] Indeed, it is not difficult to imagine a reader curious about dying wool to immediately consult book 8's "genera lanae et colorum" "types of wool and colors." They would only be disappointed to find the section lacks information on dyes.[49] Thus, in one instance Pliny aids his reader in jumping forward to two separate sections depending on what sort of dyes they are interested in; the first is one book ahead, and the second a leap of 16 scrolls. These are not the only direct references to other sections in the text. They generally occur throughout the work.[50]

Doody is correct in her analysis that the *Naturalis Historia* is not an ideal reference work, resulting in two millennia of modifications. Specific inquiries require multiple searches (e.g.

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[46] Ib. 1.11
[47] Ib. 1.22
[48] Ib.
[49] Ib. 1.18
[50] E.g. Backwards: 7.212, 14.98, 17.23, 18.187, 18.192, 18.323, 22.42, 25.18, 33.58, 35.179, 36. 149, 37.177
Forward: 6.161; 9.141, 11.67, 12.45, 14.150, 16.134, 16.143, 17.72, 19.50, 128, 169, 20.2, 22.133, 25.13, 29.51

determining how to mine iron) or preexisting familiarity with the material (e.g. that Praxiteles was a sculptor). Finding cures for headaches will only cause one. Book 1 is a cumbersome tool as a block of text, particularly if the original even lacked chapter numbers. Nevertheless, it still limits where the reader needs to look within the 37 volumes. Even modern encyclopedias can require searching through multiple entries to find the desired information. The cross-references within the text guide the reader in consulting book 1, making it still functional if not fully efficient. The text cannot favor a sequentially ordered reading when cross-references facilitate and support selective reading that has one reel back and forth through the individual scrolls. The text still aims to be useful as a ready supply of information.

Chapter 4: *Naturalis Historia* as *Historia*

I examined in the last chapter how the *Naturalis Historia* creates utility in its reference function. I will argue in this chapter that the text is *utilis* as a Roman *historia*. While not a chronological account of past events, the *Naturalis Historia* reflects other general attributes of this kind of prose, particularly moral *exempla* employed throughout the text to attack *luxuria* and *avaritia*. Scholars have made preliminary remarks about the text as a *historia*. Naas notes that immediate use of the term *historia* to title the text establishes expectations for Pliny's audience, but she does not clarify what these expectations are or how they inform the text.[1] Doody similarly refers to the text as a *historia* but provides little emphasis on the identification.[2] I will first discuss the use of the term *historia* by Greek and Roman authors, and then Pliny's use of the word. I will then examine how Pliny defines the text as a *historia* in the preface's reference to Pliny's other works and Livy. This identification of the text as a Roman history is key to understanding the Roman intellectual aims present in the *Naturalis Historia*, which will be the focus for the remainder of this thesis.

Attacks on *Luxuria*

Although Pliny himself advocates a selective reading of the text, book 1 does not always list the moralistic digressions critiquing *luxuria* and *avaritia* present throughout the text.[3] One curious about iron will immediately find a discussion of its proper application in agriculture and architecture contrasted with its immoral use in weaponry.[4] Since book 1 fails to identify these sections thoroughly, Doody argues that such moral digressions are part of a sequential reading.[5] Pliny may not wish to burden his reader with all 37 volumes of the text; however, such a thorough

[1] V. Naas, *Le Projet encylopédique de Pline l'ancien* (2002): 57
[2] A. Doody, *Pliny's Encyclopedia: the Reception of the Natural History,* (2010): 11, 39
[3] Ib. 123
[4] Pliny, *HN* 34.138
[5] A. Doody, *Pliny's Encyclopedia: the Reception of the Natural History,* (2010): 123

reading is nevertheless possible. Gibson's recent analysis of allusions by Pliny the Younger to his uncle's writing indicates that the *Epistulae* assume the addressees' familiarity with the contents of the *Naturalis Historia*.[6] Pliny's main audience was fellow elites, rather than the lower classes for whom he claims to write in the preface.[7] Such an audience read the text more for entertainment purposes than for practical concerns, and so potentially preferred to read sequentially.[8] Pliny himself suggests that the entire text merits readings since it has "viginti milia rerum dignarum cura" "20,000 things worthy of attention."[9] Alternatively, these moral digressions could form part of a reference structure as they lie in wait for an unsuspecting reader. As well, book 1 does not entirely omit to identify moral passages. It informs the reader that the discussion on shellfish concludes with "quanta luxuriae materia mari sit" "how much material of luxury is the sea's," and the treatment of dyeing with herbs includes the section "quanta in unguentis luxuria" "how much luxury there is in dyes."[10] The moral passages are a critical aspect of the text in either reading.

Luxuria is a constant subject of criticism in the *Naturalis Historia*. Goodyear intensely criticized this aspect of Pliny's prose, deeming it inappropriate for a "scientific" text.[11] However, Goodyear's criticism was anachronistic. An expectation of scientific works as objectively analytical cannot be placed on texts predating the development of empiricism in the 18th century.[12]

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[6] R. Gibson, "Elder and Better: The *Naturalis Historia* and the *Letters* Pliny the Younger" (2011): 195
[7] Pliny, *HN praef.* 6; G. Herbert-Brown, "Scepticism, superstition, and the stars: astronomical angst in Pliny the Elder" (2007): 116; cf. Columella that actual farmers have little time to read his work (*Rust.* 9.2.5).
There is a question for which there is not room to address here: could a more general audience refer to the *Naturalis Historia* with its likely placement in a public library at Rome? Such a study requires consideration of Roman library construction, availability and dissemination of texts, common literacy rates, actual interest, and any other inquiries which would likely arise in the process. However, the *Medicina Plinii*, an edition of the medicinal books reorganized by ailment and produced as early as the 4th-century CE, suggests a specialized interest and use of the text. See Doody for a history of the *Medicina Plinii* and its 6th-century descendent the *Physica Plinii* (*Pliny's Encyclopedia: the Reception of the Natural History,* (2010): 135-62).
[8] A. Doody, *Pliny's Encyclopedia: the Reception of the Natural History,* (2010): 30
[9] Pliny, *HN praef.* 17
[10] Ib. 1.9; 1.13
[11] F. Goodyear, *Cambridge History of Literature* ii *Latin Literature* (1982): 670
[12] R. Lauden, "Empiricism" (2003)

Wallace-Hadrill has more positively argued that Pliny's criticisms of *luxuria* are central to his presentation of the natural world for a Roman audience. *Luxuria* opposes *natura*, enforcing man's unnatural relationship with nature. It has men carve tunnels for precious gems and serve oysters on snow, two items from the opposite reaches of Earth, the peaks of mountains and the bottom of the sea.[13] Beagon has detailed the role of luxury further in its ambiguity. Pliny disdains the idleness and excess of luxury but appreciates living comfortably. Similarly, not every artifice in nature is deemed luxurious, such as grafting. [14] Naas has similarly noted a moral program in Pliny's discussion of architectural *mirabilia*. Pliny avidly damns Nero's *Domus Aurea* as a private construction, but he praises Augustus' obelisk for its public service as a sun-dial and solar calendar. Thus, Pliny similarly criticizes Caligula's obelisk since it only served the emperor's pride.[15] More generally, Paparazzo has noted that the moralism of the *Naturalis Historia* pairs well with the ethical focus of the natural world in Stoic thought.[16] Beagon provides the most thorough treatment of how a lite-Stoicism influences Pliny's thought; however, my concern is with how Pliny's moralism functions according to practices of Roman historiography.[17]

Moralism is perfectly suitable for Roman history. Roman historiography served a didactic purpose through commemoration. It recorded deeds of past men as a guide for the future.[18] Roman

[13] A. Wallace-Hadrill, "Pliny the Elder and Man's Unnatural History" (1990): 86-9, cf. J. Isager, *Pliny on Art and Society: the elder Pliny's chapters on the history of art* (1991): 52
[14] M. Beagon, *Roman Nature the thought of Pliny the Elder* (1992): 71, 76-8
[15] V. Naas, *Le Projet encylopédique de Pline l'ancien* (2002): 354-5
[16] Paparazzo, "Philosophy and Science in the Elder Pliny" (2011): 103-9. Paparazzo notes Pliny may derive Stoic influence from Varro's adherence to Antiochus of Ascalon, who particularly connected finding the chief good with studying nature. Although, Paparazzo notes that Antiochus also more generally influence Roman Stoic thought (109).
[17] M. Beagon, *Roman Nature the thought of Pliny the Elder* (1992): 34, 46, 132; see also M. Beagon, "The Curious Eye of Pliny the Elder" (2011): 75-7
[18] C. Kraus, "Historiography and Biography" (2005): 242

historians commonly express this moral didacticism of history. Sallust in the opening to the *Bellum Jugurthinum* says,

> atque ego credo fore qui, quia decrevi procul a re publica aetatem agere, tanto tamque utili labori meo nomen inertiae inponant, certe quibus maxuma industria videtur salutare plebem et conviviis gratiam quaerere. qui si reputaverint, et quibus ego temporibus magistratus adeptus sum [et] quales viri idem adsequi nequiverint et postea quae genera hominum in senatum pervenerint, profecto existumabunt me magis merito quam ignavia iudicium animi mei mutavisse maiusque commodum ex otio meo quam ex aliorum negotiis rei publicae venturum.
>
> And I believe there will be those who, since I decided to live far from the republic, will place the title of idleness on such a great and useful effort, especially those to whom the greatest diligence is to greet the people and to seek favor at banquets. If they reconsidered at what times I received magistracies, what type of men were unable to pursue the same, and afterward what kinds of men became senators, immediately they will think that I changed the opinion of my mind more from service than laziness and that more profit for the republic came from my leisure than the business of others.[19]

Here Sallust justifies his decision to leave political pursuits by devoting his efforts to something more beneficial to the Republic: writing history. This work is *utilis, meritus*, and a *commodum* for Rome. He explains how this happens, "memoria rerum gestarum eam flammam egregiis viris in pectore crescere neque prius sedari, quam virtus eorum famam atque gloriam adaequaverit" "the memory of achievements fans the flame in the heart of excellent men nor does it stop before their valor has equaled their reputation and renown."[20] As men hear about past deeds, they strive for excellence. Livy similarly stresses a didactic use of history in his preface,

> hoc illud est praecipue in cognitione rerum salubre ac frugiferum. omnis te exempli documenta in inlustri posita monumento intueri; inde tibi tuaeque rei publicae quod imitere capias, inde foedum inceptu foedum exitu quod uites.
>
> The particular advantage and profit in learning things is that you look upon the lessons of every example placed on a brilliant monument; from which you may take

[19] Sallust, *Iug.* 4.3-4
[20] Ib. 4.6

> for yourself and the republic what to imitate, and you may avoid what is foul in the beginning and foul in the end.[21]

Through learning examples from the past one gains models both to imitate and reject for both one's own and the general Republic's benefit. Such exemplarity was central to Roman history's didacticism by ensuring the continuity of the *mos maiorum*.[22]

The focus of the *Naturalis Historia* is not past events like a typical Roman history, such as the works of Sallust, Livy, and Tacitus; however, Pliny's text does not lack historical material either. He notes how Marius assigned the eagle as the badge of the Roman legions.[23] He narrates the utter loyalty of the dog of Titius Sabinus, which tried to save his executed master from drowning in the Tiber.[24] Pliny often mentions the first appearance of an animal or the first use of a resource in the city. He recounts that elephants first entered Italy during the Pyrrhic Wars.[25] He then records the animal's use in gladiatorial combat, particularly Pompey's show in the dedication of the temple of Venus Victrix, when the dying animals elicited pity from the crowd.[26] The text is more akin to the practice of Roman antiquarianism. Williams has noted Pliny's antiquarian interest in coinage.[27] Naas too recognizes antiquarian practices in the *Historia Naturalis*.[28] Similarly, Doody, implicitly treating the text as a *historia*, notes that Pliny's use of *mirabilia* to conclude sections is a similar tactic in other types of *historia*, such as Tacitus *Annales*.[29]

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[21] Livy *praef.* 10
[22] M. Roller, "The exemplary past in Roman historiography and culture" (2009): C. Schultze, "Encyclopaedic Exemplarity in Pliny the Elder (2011): 171;
[23] Pliny, *HN* 10.16
[24] Ib. 8.145; cf. Tacitus, *Ann.* 4.68-70 narrates the prosecution but omits mention of the man's execution or the dog's tragic loyalty.
[25] Ib. 8.16
[26] Ib. 8.18-22
[27] J. Williams, "Pliny, antiquarianism, and Roman imperial coinage" (2007): 171-2
[28] V. Naas, *Le Projet encylopédique de Pline l'ancien* (2002): 57
[29] A. Doody, *Pliny's Encyclopedia: the reception of the Natural History* (2010): 36

Defining *Historia*

Antiquarianism as a form of Roman history results from the term's ambiguous use among ancient authors. *Historia* originally derives from the Greek verb *historeō* (to inquire). Hence, a *historia* in origin is an inquiry, the process of learning.[30] Its associations with recording the past are made clear from the beginning of Herodotus' *Histories*,

> Ἡροδότου Ἁλικαρνησσέος ἱστορίης ἀπόδεξις ἥδε ὡς μήτε τὰ γενόμενα ἐξ ἀνθρώπων τῷ χρόνῳ ἐξίτηλα γένηται, μήτε ἔργα μεγάλα τε καὶ θωμαστά, τὰ μὲν Ἕλλησι τὰ δὲ βαρβάροισι ἀποδεχθέντα, ἀκλεᾶ γένηται, τά τε ἄλλα καὶ δι᾽ ἣν αἰτίην ἐπολέμησαν ἀλλήλοισι.
>
> This is the display of the inquiry of Herodotus of Halicarnassus, so that neither events may fade through time from man, nor that the great and amazing deeds, some exhibited by the Greeks and some by the barbarians, may become unrenowned, and also through what cause they waged war with each other.[31]

The purpose of Herodotus' inquiry is to prevent the grand events of the Persian war from slipping from memory. Josephus also refers to his *Jewish Antiquities* as a *historia*.[32] However, the term referred to more than recording the past, and notably, Thucydides abstains from using the word in his history. Plato refers to a "φύσεως ἱστορίαν" "inquiry of nature."[33] Aristotle calls his treatise on animals "ἡ ἱστορία περί τα ζώα" "History of animals."[34] Theophrastus similarly called his text on plants "Περί φυτῶν ἱστορία" "History of plants."

Roman authors typically limit *historia* to narrative historiography.[35] In *De inventione* Cicero says "historia est gesta res ab aetatis nostrae memoria remota" "history is a deed done separated from the memory of our lifetime."[36] Aulus Gellius and Varro similarly use *historia*

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[30] D. Potter, *Literary Texts and the Roman Historian* (1999): 11
[31] Herodotus, 1.1
[32] Josephus, *AJ* 1.1
[33] Plato, *Phaedo*, 96a
[34] Aristotle, *HA*; cf. *Resp.* 477a7, *PA* 674b16
[35] "historia" (Lewis and Short)
[36] Cicero, *De Inv.* 27: However, Cicero's definition of *historia* here falls within a larger discussion on the topic of *narratio*, in which Cicero defines three forms of narrative devices according to their truth and credibility. Thus, in this instance the definition must be limited to narrative history.

generally to refer to narratives of the past.[37] The term *annales* further confuses the practice of Roman *historia* as historiography.[38] This term could refer to the official documents of each year's events annually recorded by the *pontifex maximus* on tablets called the *Annales Maximi*.[39] However, *annales* also refers to literary histories, such as those of Fabius Pictor and Cato.[40] Livy and Tacitus only refer to their works as *annales*, never *historia*, but Quintilian only uses *historia* unless the works are titled *Annales.*[41] There was debate over the difference. In Cicero's *De oratore* Antonius defines both as addressing past events with the implication that *annales* lack stylistic adornment.[42] Aulus Gellius cites Verrius Flaccus, who notes that some consider *historia* as indicating that the author participated in the events.[43] Verrius, as Gellius notes, did not agree. Aulus Gellius then provides a parallel to taxonomy, "Sed nos audire soliti sumus annales omnino id esse, quod historiae sint, historias non omnino esse id, quod annales sint: sicuti, quod est homo, id necessario animal est; quod est animal, non id necesse est hominem esse" "But we are accustomed to hearing that *annales* are entirely what *historiae* are, but *historiae* are not entirely what *annales* are: just as what is a man is necessarily an animal, but what is an animal is not necessarily a man."[44] *Historia* is a genus, while *annales* a species within it. Gellius then concludes with a general definition of said genus, "Ita 'historias' quidem esse aiunt rerum gestarum uel expositionem uel demonstrationem uel quo alio nomine id dicendum est" "So they say that '*historiae*' are either an exhibition, description, or by whatever other name it should be called, of deeds."[45] Gellius

[37] Aulus Gellius *NA* 1.23, 3.7; Varro, *Ling.* 5.30, 5.148, 5.157; D. Potter, *Literary Texts and the Roman Historian* (1999): 11, 170n.17
[38] Greeks similarly possessed synonyms for recording events: e.g. *suggrapheus* and *suggraphē*. (D. Potter, *Literary Texts and the Roman Historian* (1999): 11)
[39] Cicero, *De or.* 2.53
[40] Fabius Pictor: Cicero, *Div.* 1.21.43; Pliny, *HN* 10.71; Cato: Pliny, *HN* 8.11
[41] D. Potter, *Literary Texts and the Roman Historian* (1999): 170n.17
[42] Cicero, *De or.* 2.52
[43] Aulus Gellius, *NA* 5.18.1-2
[44] Ib. 5.18.3-5
[45] Ib. 5.18.6

similarly defines the topic as past deeds, *res gestae*, but he does not restrict the method of presentation. In fact, Gellius does not use the term *narratio* like Cicero in *De inventione*. He instead uses two terms of display, *expositio*, "a placing out," and *demonstratio* "a pointing out." In fact, Gellius considers the subject more important to defining *historia* than methodology. He lists two terms of display before impatiently concluding with an *et alia*. Gellius' focus on the subject agrees with the definition of *annales* as a subtype of *historia*. *Historia* refers to a class of works about *res gestae*, and the presentation of *res gestae* by year categorizes a *historia* as *annales*.[46]

Cicero's *De oratore* also provides a more general definition of *historia*, "Historia vero testis temporum, lux veritatis, vita memoriae, magistra vitae, nuntia vetustatis" "Indeed *historia* is time's witness, truth's light, memory's life, life's teacher, and the proclaimer of antiquity."[47] Here Cicero, in the mouth of Antonius, provides a more general definition of *historia*. It is a recollection of the past but there is no explicit requirement of a narrative. Instead, it educates how to live and ensures the survival of knowledge about antiquity. This more general definition suits Roman antiquarian works. Potter notes that the typical focus by ancient sources on defining narrative history does not serve other branches of cultural recordings, such as the works of Varro or Aulus Gellius.[48] Kraus similarly divides Roman historiography into two groups: typical Roman histories which are chronological and narrative in form, and those that are synchronic and non-narrative in form, which are commonly called antiquarianism.[49] Thus, antiquarianism fits within this model of *historia* as another form of presenting Roman *res gestae*.

[46] Ib.
[47] Cicero, *De or.* 2.28
[48] D. Potter, *Literary Texts and the Roman Historian* (1999): 70
[49] C. Kraus, "Historiography and Biography" (2005): 242

What is in a title? Pliny's *historia*

So much for ancient definitions of *historia*. In Greek, the term indicated any intellectual inquiry. Roman authors mainly characterize it as narratological historiography but included other works recording the past. The title of the *Naturalis Historia*, which Pliny bestows in the first three words, indicates that it is a *historia*.[50] Here, Pliny plays with both Greek and Roman meanings of the word. The title alludes to Greek *historia phuseōs* and Aristotle's *Historia Animalium/ Historia peri zōōn*. Pliny associates his work with Aristotle in the first zoological book "Aristoteles diversa tradit, vir quem in his magna secuturus ex parte praefandum reor" "Aristotle provides a different version, a man whom I think must name first since I have followed him greatly in these matters."[51] In the context of discussing body parts Pliny again calls his own work a *historia*, "sed mox plura de hoc, cum membratim historia decurret" "but soon there will be more about this, when a *historia* runs through limb by limb," and "nunc per singulas corporum partes praeter iam dicta membratim tractetur historia" "now a *historia* will be pulled through each part of bodies limb by limb except those already mentioned."[52] As a discussion about body parts, Pliny is using the more general Greek sense. Pliny also uses the term *historia* in the summation of each book's contents in book 1. The formula is, "summa: res et historiae et observationes" "Total: things, inquiries (*historiae*), and observations" followed by a numeral. Here again, Pliny uses the more general Greek notion of *historia* as inquiries. However, Pliny also uses *historia* to refer to chronicles of the past. On Italy's history he proposes, "Actaeonem enim et Cipum etiam in Latia historia fabulosa reor" "I think that Actaeon and Cipus in Latin *historia* are mythical."[53] Pliny says about opals, "insignis etiam apud nos historia" "it is also distinguished by *historia* among us," and he proceeds to narrate

[50] Pliny, *HN praef.* 1
[51] Pliny, *HN* 8.43
[52] Ib. 7.72, 11.121
[53] Ib. 11.123

Marc Antony proscribing Nonius' for his opal ring worth 2 million sesterces.[54] Pliny calls Herodotus' text a *historia*.[55] He titles Xanthus, who wrote a history of Lydia, "historiae auctor" "a source of *historia*."[56] He similarly calls Callisthenes, Aristotle's nephew, who wrote a record of the Third Sacred War, a ten-book *Hellenica*, and *The Deeds of Alexander*, "historiarum scriptorem" "a writer of *historiae*."[57]

In book 7 while listing various inventions, Pliny seems more precisely to define *historia*. He notes about writing, "prosam orationem condere Pherecydes Syrius instituit Cyri regis aetate, *historiam Cadmus Milesius*" "Pherecydes of Syria established writing prose speech in the age of King Cyrus, and *Cadmus of Miletus historia*."[58] Earlier in the *Naturalis Historia* Pliny claims about Cadmus, "qui primus prosam orationem condere instituit" "who first established writing prose speech."[59] These two passages are inconsistent. Such an inconsistency may stem from using conflicting sources on the two authors' primacy.[60] Strabo names the inventors of prose Cadmus, Pherecydes, and Hecataeus together.[61] Such a listing can lend primacy to Cadmus, but Strabo more generally refers to this triad together as the first to compose prose. Pliny's temporal ablative "Cyri regis aetate" operates for both Pherecydes and Cadmus, similarly suggesting the two are contemporaries. Pherecydes did not write about past events, but cosmogony and theogony.[62] Thus he wrote in prose what Hesiod had treated in verse. As for Cadmus of Miletus, the *Suda* claims that he wrote a four-book treatise on the founding of Miletus and Ionia.[63] Perhaps in Pliny's

[54] Ib. 37.81
[55] Pliny, *HN* 12.18
[56] Ib. 25.14; K. Meister, "Xanthus (2)" (2012)
[57] Ib. 36.36; A. Bosworth "Callisthenes" (2012)
[58] Pliny, *HN* 7.205
[59] Ib. 5.112
[60] W. Smith, *Dictionary of Greek and Roman Biography and Mythology* I (1870): 525. The *Suda* notes the debate (Φ.214).
[61] Strabo 1C18
[62] J. Rusten, "Pherecydes (1),"(2012); *Suda* Φ.214
[63] L. Pearson and S. Hornblower, "logographers" (2012).; Suda K.21

account both were first to write prose like in Strabo; however, Cadmus was first specifically to write *historia.* Josephus makes a similar division. He states that Cadmus, along with Acusilaus of Argos, were the first Greeks to write *historia*. He names Pherecydes of Syria as one of the first Greeks to write "περὶ τῶν οὐρανίων τε καὶ θείων" "on heavenly bodies and the gods.[64] Thus in book 7 Pliny partially defines *historia* to recording the past, although he may also merely be echoing common sentiment about Cadmus. Furthermore, we possess little sense of Cadmus' writing. It could have been a narratological history about Miletus and Ionia, but it may also have been a collection of local histories for Ionia like Cato's *Origines* was for Italy. From this, we can at least determine that Pliny does not consider all prose writing *historia*.

Overall, Pliny uses both Greek and Roman senses of *historia*: a general intellectual investigation and the recording of the past. He combines these notions in the introduction to the work. As noted above, Pliny immediately defines the text as a *historia*. The text begins, "Libros Naturalis Historiae, novicium Camenis Quirtium tuorum opus" "the books of the *Naturalis Historia*, a new work for the Muses of your Quirites."[65] The work immediately appears closer to a more general Greek *historia* like the works of Aristotle and Theophrastus. His readers, expected to know Greek, made a similar association.[66] In fact, some could read the phrase *naturalis historia* as a Latin translation of *historia phuseōs* (ἱστορία φύσεως). Pliny, however, immediately offsets this Hellenism with a subtitle that emphasizes the text's Romanness. He makes it for the Camenae, the purely Latin term for the muses, and not the Greek *Musae*. Pliny only further bluntly notes the non-Greek origin of these muses by indicating they belong to the Quirites, the Roman citizens. In

[64] Josephus, *Ap.* 1.14
[65] Pliny, *HN praef.* 1
[66] Doody notes that Pliny's comments on the possibility of confusing the Greek words for ivy and rockrose do not actually provide the Greek, implicitly expecting the knowledge of his reader ("The Science and Aesthetics of Names in the *Natural History*" (2011): 125).

this dedication Pliny establishes a program for his reader. Yes, this text is like those other Greek *historia*, but it is definitively a Roman one.

Pliny re-emphasizes this notion of the work as a Roman *historia* later in the preface,

> Equidem ita sentio, peculiarem in studiis causae eorum esse, qui difficultatibus victis utilitatem iuvandi praetulerint gratiae placendi, idque iam et in aliis operibus ipse feci et profiteor mirari me T. Livium, auctorem celeberrimum, in historiarum suarum, quas repetit ab origine urbis, quodam volumine sic orsum: "iam sibi satis gloriae quaesitum, et potuisse se desidere, ni animus inquies pasceretur opere." profecto enim populi gentium victoris et Romani nominis gloriae, non suae, composuisse illa decuit. maius meritum esset operis amore, non animi causa, perseverasse et hoc populo Romano praestitisse, non sibi.
>
> Indeed I feel that the proper purpose is in the works of those who overcame the difficulties and put the usage of helping before the favor of pleasing. I myself have already done this in other works, and I confess that I marvel at Titus Livy, most distinguished author, in a certain volume of his own histories, which he traced back from the beginning of the city, began "I have already sought enough fame and could have rested, if my restless mind were not nourished by work." For from the start he should have composed those volumes for the fame of the nations-conquering people and the Roman name, not his own. It would have been more deserving that he continued for the love of work, not for the sake of his mind, and to do this for the Roman people, not himself.

Pliny first establishes that the ideal purpose of a text is utility. He notes that his other writings did this. These we know from his own references and Pliny the Younger's letter to Baebius Macer. Prior to the *Naturalis Historia*, Pliny wrote a handbook on throwing the javelin from horseback (*De iaculatione equestri condito*), a biography of Pomponius Secundus (*De Vita Pomponi Secundi*), a twenty-book history of the German Wars (*Bella Germaniae*), a six-book treatise on training an orator (*Studiosus*), eight books on uncertain grammar (*Dubii Sermones*), and a thirty-one-book history which continued from that of Aufidius Bassus (*A fine Aufidi Bassi*).[67] From the preface we learn that the last work, while completed, was to be published posthumously by his

[67] Pliny, *HN* 8.162; Pliny the Younger, *Ep.* 3.5.3-6

heir, his nephew Pliny the Younger.[68] Pliny's works on javelin throwing, oratorical training, and grammar are plainly instructional. When Pliny refers to his other works being *utilis* he may precisely mean these; however, we have seen that Roman historians consistently portray their writing's utility through moral didacticism. Pliny's histories must have had the same aspect, and the biography of Pomponius Secundus also had an educational element. History and biography were not distinct genres in antiquity but differed in focus.[69] Plutarch begins his *Life of Alexander*,

> οὔτε γὰρ ἱστορίας γράφομεν, ἀλλὰ βίους, οὔτε ταῖς ἐπιφανεστάταις πράξεσι πάντως ἔνεστι δήλωσις ἀρετῆς ἢ κακίας, ἀλλὰ πρᾶγμα βραχὺ πολλάκις καὶ ῥῆμα καὶ παιδιά τις ἔμφασιν ἤθους ἐποίησε μᾶλλον ἢ μάχαι μυριόνεκροι καὶ παρατάξεις αἱ μέγισται καὶ πολιορκίαι πόλεων.
>
> For we do not write histories but lives, for excellence or wickedness is not always plain in the most notable deeds, but often something small, both a phrase and witticism make a greater show of character than clashes where thousands die, the greatest battles, and the besieging of cities.[70]

Plutarch pairs the two forms of writing but distinguishes biography in its examination of minutiae of an individual's behavior to arrive at the root of their character. History focuses on grand deeds. The two are both exemplary, but the difference is that biography has *exempla* in the conduct of one, while history in the behavior of many.

Thus, Pliny idealizes and creates pragmatic texts, but a useful text is not inherently a *historia*. Useful texts can also be manuals on grammar, oratorical training, or throwing a javelin from horseback. Pliny does, however, connect the *Naturalis Historia* directly to Roman historiography in his immediate comparison to Livy. He praises Livy as *celeberrimus auctor* but notes a fault in his intentions for writing *Ab urbe condita*. In this quotation from a lost book of Livy's voluminous work, Pliny finds Livy's desire for *gloria* and sustaining his own mind to be

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[68] Pliny, *HN praef.* 20
[69] C. Kraus, "Historiography and Biography" (2005): 251-4
[70] Plutarch, *Alex.* 1.2

selfish. Rather, the effort should have been for Rome's glory and to benefit the general Roman people. Pliny has made his own intention in such a dedication clear from the first line; his work is for the *Camenae* of the *Quirites*. Pliny uses Livy, renowned historian, as another author to represent *utilis* writing. In doing so he immediately draws a programmatic comparison between the *Naturalis Historia* and Livy's massive work which spanned the entire history of Rome. He suggests that his work too will be a Roman *historia*, but one properly intended for the Roman nation.

However, Pliny's reference to Livy is not merely for contrast. His comparison to *Ab urbe condita* invites further comparisons with Livy's own preface. As already noted, Livy explains the exemplary function of his text.[71] Schultze has noted that Pliny similarly employs historical *exempla*.[72] He first analyzes Pliny's treatment of C. Furius Chresimus, a successful farmer but disliked freeman.[73] His neighbors charged him with using magic spells to steal their crops. Chresimus defended himself by bringing his tools and workers into the trial and exclaiming, "Veneficia mea, Quirites, haec sunt!" "These are my spells, Romans!" Schultze observes that Pliny uses Chresimus as an example of diligent farm work to summarize the preceding topics of book 18.[74] Schultze also analyzes Pliny's story of Cn. Domitius Ahenobarbus attempting to purchase Crassus' house on the Palatine for 6 million sesterces. Crassus agreed on the condition that the six trees on the property be exempt from the purchase, but Domitius rejected this offer. Crassus then remarked that Domitius' previous criticism of his immodest living was hypocritical when Domitius evidently valued six trees at 6 million sesterces.[75] The episode comments on the

[71] Livy, *praef.* 10
[72] Cf. J. Isager, *Pliny on Art and Society: the elder Pliny's chapters on the history of art* (1991): 223
[73] Pliny, *HN* 18.41-3
[74] C. Schultze, "Encyclopaedic Exemplarity in Pliny the Elder" (2011): 176
[75] Pliny, *HN* 17.1-4

consideration of *exempla* when Crassus questions Domitius if he himself is the *grave exemplum* "the grevious example." Schultze, however, notes that Domitius comes off the worse because of Crassus' wit, but both figures are problematic since they both highly value the trees.[76] Another example of such ambiguous exemplarity occurs in the discussion of opals in book 37. Pliny narrates that Marc Antony proscribed Nonius because of his opal ring valued at 2 million sesterces. Nonius fled Rome and took only the ring with him. Neither figure comes out favorably. Pliny comments,

> sed mira Antoni feritas atque luxuria propter gemmam proscribentis, nec minus Noni contumacia proscriptionem suam amantis, cum etiam ferae abrosa parte corporis, propter quam periclitari se sciant, et relicta redimere se credantur
>
> But the ferocity and luxury of Anthony proscribing for a gem is wondrous. No less wondrous is Nonius' stubbornness in loving the cause of his own proscription when even wild beasts are believed to save themselves by gnawing off and abandoning the part of their body which they know puts them in danger.[77]

The text criticizes the *luxuria* of both Marc Antony and Nonius. Marc Antony is cruel in his greed to proscribe someone merely to obtain a valuable gem. Nonius is foolish in his self-destructive desire to keep it. Even a wild beast, Pliny says, will chew off the leg that keeps it snared. Nonius could not even give up a small piece of jewelry.

Pliny further alludes to Livy's preface through the vices he attacks. In his preface, Livy remarks,

> ad illa mihi pro se quisque acriter intendat animum, quae uita, qui mores fuerint, per quos uiros quibusque artibus domi militiaeque et partum et auctum imperium sit; labente deinde paulatim disciplina uelut desidentes primo mores sequatur animo, deinde ut magis magisque lapsi sint, tum ire coeperint praecipites, donec ad haec tempora quibus nec uitia nostra nec remedia pati possumus peruentum est.
>
> In my opinion, each person should keenly direct their mind to these questions on their own behalf: What life and customs there were? Through what men and with

[76] C. Schultze, "Encyclopaedic Exemplarity in Pliny the Elder" (2011): 183-6
[77] Pliny, *HN* 37.81

> what skills the empire was obtained and increased at home and in war? Then, with learning slipping little by little, customs first gave way as if sinking from the mind. More and more they fell. Then they began to go headlong until these times in which we can endure neither our vices nor their cures.[78]

He will emphasize what vices are the root, "nuper diuitiae auaritiam et abundantes uoluptates desiderium per luxum atque libidinem pereundi perdendique omnia inuexere" "recently riches have brought in avarice, and overflowing pleasure has introduced through luxury the delight and the desire of destroying everything and perishing."[79] Livy attacks the recent development of self-destructive *avaritia* and the desire for *luxus*. Roman historiography commonly treats these vices as an import, flourishing in the wake of Carthage's destruction and Roman expansion.[80] Sallust narrates the rise of avarice and luxury in the empire's growth and the corruption of Sulla's troops.[81] *Avaritia* and *luxuria* are precisely what corrupt the young Catiline.[82] As noted above, these are the same vices that Pliny consistently attacks in the *Naturalis Historia*. Pliny famously attacks *avaritia* in the text as he unites it with the decline of intellectual pursuits.[83] Pliny in citing Livy's *Ab urbe condita* as an example of a *utilis* text suggests to his reader that his work will possess a similar beneficial function for Rome. It too will seek to correct the vices of excess which corrupt Rome's people.

It is one thing to say that the *Naturalis Historia* is a *historia* and another that it has elements of Roman historiography. The use *of exempla* was not restricted to historiography. Orators also used them.[84] The honorifics of Roman inscriptions similarly acted as impetuses for ambition

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[78] Livy, *praef.* 9
[79] Ib. *praef.* 12
[80] S. Harrison, "Decline and Nostalgia," (2005): 287-9
[81] Sallust, *Cat.* 10.1-6, 11.5-6
[82] Ib. 5.8
[83] Pliny, *HN* 14.4
[84] F. Bücher, *Verargumentierte Geschichte: Exempla romana im politischen Diskurs der Späten römischen Republik* (2006)

through exemplarity.[85] Sallust directly compares history to funeral *imagines*.[86] Similar criticisms of *luxuria* and *avaritia* also appear elsewhere in Roman moralism.[87] Rudich has observed how moralistic programs prevail in all Roman literature of the Neronian era.[88] However, Naas and Williams have called Pliny's work antiquarian, a form of Roman historiography.[89] More central is that Pliny invites and imposes frameworks of *historiae* on to his text. The title itself introduces the work as a *historia*. In the *exemplum* of Marc Anthony and Nonius, Pliny guides his reader when he introduces the section "insignis etiam apud nos historia" "It is also distinguished among us in *historia*."[90] Similarly, moralistic passages commonly feature the term *exemplum* in their headings in book 1: e.g. "summae pietatis exempla" "examples of the utmost sense of duty," "honorum exempla mirabilia" "wondrous examples of honors," and "frugalitas antiquae in argento exempla" "examples of ancient frugality in silver."[91] Such headings invite the exemplary reading of historiography. Pliny only further emphasizes a historiographical character by drawing a direct comparison of the *utilitas* of his text with Livy's, who in his own preface specifically cites the exemplary function of history to correct the same vices Pliny attacks.

Intellectual History

Nevertheless, Pliny's *historia* is markedly unique from other Roman histories in its intellectual focus. Pliny may attack *luxuria* and *avaritia* because it is counter to nature or results in men's selfish cruelty, but these vices are more his target because they have halted intellectual progress. Pliny celebrates the industry and diligence of the ancients in their *studia*. He introduces the topic

[85] H. Flower, "Alternatives to Written History in Rome" (2009): 68
[86] Sallust, *Iug.* 4.5
[87] S. Harrison, "Decline and Nostalgia," (2005): 289-8
[88] V. Rudich, *Dissidence and Literature Under Nero* (1997): 7-11, passim.
[89] V. Naas, *Le Projet encylopédique de Pline l'ancien* (2002): 57; J. Williams, "Pliny, antiquarianism, and Roman imperial coinage" (2007): 171-2;
[90] Pliny, *HN* 37.81
[91] Ib. 1.7, 33

of medicinal plants, "in admirationem curae priscorum diligentiaeque animum agit. nihil ergo intemptatum inexpertumque illis fuit, nihil deinde occultatum quodque non prodesse posteris vellent" "It rouses the mind to admiration for the ancients' care and diligence. They left nothing untried and unexplored. Then nothing was hidden which they did not wish to give forth to posterity."[92] He echoes this sentiment again in book 27, "Crescit profecto apud me certe tractatu ipso admiratio antiquitatis, quantoque maior copia herbarum dicenda restat, tanto magis adorare priscorum in inveniendo curam, in tradendo benignitatem subit" "At once my admiration truly flourishes in the contemplations of antiquity. The greater the amount of herbs that remained to be said, the more one adores the ancients' care in their discoveries and their kindness in giving them over."[93] These men of the past, who have advanced knowledge, have also provided the greatest kindness (*benignitas*) for posterity.

Pliny conversely deplores his contemporaries' idleness and lack of interest. He states that this intellectual intertia results from greed, "nimirum alii subiere ritus circaque alia mentes hominum detinentur et avaritiae tantum artes coluntur" "Truly other customs have arisen, and the minds of men were held around other pursuits. Only the arts of avarice are now cultivated."[94] Indeed, greed overcomes even those who do turn to intellectual pursuits,

> at nos elaborata iis abscondere ac supprimere cupimus et fraudare vitam etiam alienis bonis. ita certe recondunt qui pauca aliqua novere, invidentes aliis, et neminem docere in auctoritatem scientiae est. tantum ab excogitandis novis ac iuvanda vita mores absunt, summumque opus ingeniorum diu iam hoc fuit, ut intra unumquemque recte facta veterum perirent.
>
> But we desire to hide and conceal the ancients' endeavors and to rob life of another's goods. So surely do those, who know a few things, hide them, begrudging others, and to teach no one is for their authority in knowledge. So much have customs departed from searching new things and aiding life, and this now has been

[92] Ib. 25.1
[93] Ib. 27.1
[94] Ib. 14.4

> the greatest work of talents, so that the deeds of the ancients perish directly among each person.[95]

Pliny's contemporaries do not publicly disseminate knowledge but hoard it for themselves, entirely contradictory to why discoveries are made in the first place. Such stockpiling completely negates the *benignitas* established in *tradendum* for *posterii*. In this statement, Pliny identifies intellectual pursuits as part of the *mos maiorum* that have recently declined. Howe has argued that Varro serves as a model of a *bonus vir* in the *Naturalis Historia* in his intellectual pursuits.[96] Indeed, more generally Pliny's citations of the *auctores* only provides continuous *exempla* of proper intellectuals. Book 1 is a catalog of models for his readers to emulate in bestowing knowledge to posterity. Book 7 features a similar catalog of notable Roman intellects, in which Pliny says about the Romans "innumerabilia deinde sunt exempla Romana, si presequi libeat, cum plures una gens in quocumque genere eximios tulerit quam ceterae terrae" "There are countless Roman examples, if one should choose to pursue them, since one nation has brought forth more distinguished men of any kind than the other lands."[97] Pliny praises Julius Caesar for his intellect rather than his valor,

> Animi vigore praestantissimum arbitror gentium Caesarem dictatorem, nec virtutem constantiamque nunc commemoro nec sublimitatem omnium capacem quae caelo continentur, sed proprium vigorem celeritatemque quodam igne volucrem. scribere aut legere, simul dictare et audire solitum accepimus, epistulas vero tantarum rerum quaternas pariter dictare librariis aut, si nihil aliud ageret, septenas.
>
> I think that Caesar the dictator was the most eminent talent in the mind's force. I do not now recall his valor and steadiness nor his grand sublimity, which is contained by the heavens, but his peculiar force and speed as if it was winged with fire. We learn that he was accustomed to write or read at the same time he spoke and listened, indeed to equally dictate to his secretaries four letters of important matters, or, if he did nothing else, seven.[98]

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[95] Ib. 25.1-2
[96] N. Howe, "In Defense of the Encyclopedic Mode: on Pliny's 'Preface' to the '*Natural History*' (1985): 573
[97] Ib. 7.107-19
[98] Ib. 7.91

Pliny will continue to recount Julius Caesar's victories, but he introduces Caesar's excellence not through military conduct, but through Caesar's literary sagacity. Pliny makes mental vigor and intelligence an essential Roman quality. This intelligence provides discoveries and observations which aid future generations so long as that material is available. Thus, Pliny champions his *auctores* as *exempla* who publish their information. In compiling the *Naturalis Histora* he emulates them himself. Pliny's laments are like those of other Roman historians who characterize *luxuria* and *avaritia* as impairing the customs of current Romans in contrast to their ancestors, but he differs in his focus on intellectualism as the attribute of Roman diligence which is at risk of being lost.

Pliny's history is not a history of its wars to preserve *exempla* of militaristic valor. The text does not ignore the benefits of Rome's conquests, but they are not the focus. Rome's very conquest of the world serves an intellectual victory,

> Scythiam herbam a Maeotis paludibus, et euphorbeum e monte Atlante ultraque Herculis columnas ex ipso rerum naturae defectu, parte alia britannicam ex oceani insulis extra terras positis, itemque aethiopidem ab exusto sideribus axe, alias praeterea aliunde ultro citroque humanae saluti in toto orbe portari, inmensa Romanae pacis maiestate non homines modo diversis inter se terris gentibusque, verum etiam montes et excedentia in nubes iuga partusque eorum et herbas quoque invicem ostentante! aeternum, quaeso, deorum sit munus istud! adeo Romanos velut alteram lucem dedisse rebus humanis videntur.
>
> The Scythian herb from the Maeotian marshes, and euphorbia from Mount Atlas and beyond the pillars of Hercules from that very failure of the nature of things, elsewhere the British herb from islands of the ocean lying beyond the lands, and similarly aethiopis from the axis burned by the stars, and others beyond from other places are born this way and that for the benefit of humanity, with immeasurable greatness of Roman peace revealing in turn not only peoples among diverse lands and tribes but also mountains and peaks soaring into the clouds, their offspring (stones) and also herbs. I pray that this kindness of the gods be eternal! They seem to have given the Romans just as a second light for human affairs.[99]

[99] Ib. 27.3

Rome's expansion becomes a function of intellectual endeavors, bestowing discoveries from the edges of the world for the benefit of all humanity. Similarly, Rome's first large private library housed books gained through conquest. After the defeat of Macedon in 168 BCE Aemilius Paullus gave the royal court's library to his sons.[100] Indeed, the *externi* tend to dominate Pliny's list of *auctores*.[101] Thus, Pliny also provides non-Roman *exempla* in his *auctores* and the catalog of intellectuals in book 7 precisely because they have come under the encompassing light of this Roman sun.

In fact, with the concentration of power in the *princeps*, the former emblems of militaristic valor were no longer as available to those in the Empire as they had been to citizens of the Republic. Only emperors and their heirs could hold a triumph. The consulship had been radically altered, with the territories of conquest designated imperial provinces. Moatti argues that writing became an alternative avenue for elites in the late Republic precisely due to the concentration of power among the few great generals.[102] However, Republican intellectual endeavors focused on senatorial and legal proceedings and developed to question authority, resulting in dynamism and pluralism, which Moatti argues perished under the unifying regime of Augustus.[103] Pliny resituates intellectual endeavors in the study of the natural world. Furthermore, he characterizes the Roman Empire as a world at peace.[104] How much could there be for Romans in the 1st-century to emulate in great commanders like Scipio Africanus, Pompey the Great, or Julius Caesar? In framing excellence as intellectualism, Pliny establishes an avenue of Roman *virtus* more generally available among the elite in the principate. Good Roman, do not imitate Julius Caesar because of

[100] Plutarch, *Aem.* 28.7; M. Affleck, "Priests, patrons, and playwrights: Libraries in Rome before 168 BC" (2013): 124-6
[101] A. Doody, "The Science and Aesthetics of Names in the *Natural History*" (2011): 125
[102] C. Moatti, *The Birth of Critical Thinking in Republican Rome* (2015): 164
[103] Ib. 206-19
[104] Ib. 14.2; 27.3

his military victories but because of his rapid intellect. Varro, Cicero, and even Aristotle as the *auctores* are your new *exempla*. Keep your eyes low, but you will surely discover some power of nature in that insect, blade of grass, or maybe even in that stone. Intellectual efforts are *iuvanda vita* and Pliny notes, "Deus est mortali iuvare mortalem, et haec ad aeternam gloriam via" "the divine is that a mortal helps a mortal, and this is the path to eternal glory."[105] To make intellectual endeavors was to provide for posterity. They grant further understanding of the world and its nature, allowing humanity to benefit from its products. Hence, literary intellectual achievement was a different path to eternal renown. The sentiment echoes Horace's *Odes*, "exegi monumentum aere perennius" "I have completed a monument more eternal than bronze."[106]

Pliny idealizes utility in texts, which he establishes two ways in the *Naturalis Historia.* First is through a reference structure which allows one to optimize their time reading, and the second is through the moral didacticism of Roman historiography. The first is established by the concluding remarks of the preface which explain the use of book 1. The cross-references within the text further help selective reading. Pliny's own title and his comparisons to Livy establish the second. He, like other Roman historians, attacks *avaritia*, *luxuria*, and their related vices which beset his contemporaries. Pliny contrasts these vices with the virtues of the *auctores* and *antiquii*/*veteres* for their intellectual endeavors to aid posterity. Hence, Pliny in the *Naturalis Historia* aims to provide models of emulation for his contemporaries who are failing this process of transmission. He accomplishes this by giving information recorded by past *auctores*, providing *mirabilia* to arouse his audience's interest, and using the principles of Roman historical didacticism to establish how intellect is a component of the *mos maiorum* which current Romans

[105] Ib. 2.18
[106] Horace, *Odes* 3.30

must seek. In these actions, Pliny believes that men provide the greatest benefit and thereby earn for themselves eternal renown.

The Difference between a *Quaestio* and a *Historia*

In this regard I believe the works of Pliny and Seneca differ, and so I do not consider whether Seneca's *Naturales Quaestiones* is a *historia* in this thesis. This may be an unfair dismissal. *Quaestio* is itself a direct Latin translation of the Greek word *historia*; however, Seneca and Pliny differ in the focus and aims of their texts. The aim of Seneca is for the reader first to consider nature on Earth to then be able to contemplate the heavens. In the *Naturales Quaestiones*, he focuses on natural phenomena. Book 1 discusses meteorological oddities, e.g. meteors, rainbows, and halos. Book 2 treats thunder and lightning. Book 3 discusses water, continuing into the first section of book 4 about the Nile. The remainder of book 4 details hail, snow, and ice. Book 5 focuses on the winds. Book 6 discusses earthquakes and returns to muse on the Nile's source. The seventh and final book explains comets. Seneca discusses these phenomena to exhibit their causes, demonstrating that they are rational, regular occurrences and part of the natural order. Thereby, with proper understanding of these phenomena one learns not to fear them.[107] These considerations of Earth, Seneca remarks in the first book's preface, are the first step for then considering the heavens and the universe, and thereby the Stoic god.[108]

Beagon has noted that Seneca and Pliny emphasize different perspectives of the natural world.[109] Seneca esteems the celestial while referencing the mundane only as a preliminary consideration. Pliny only discusses the heavens in book 2 and criticizes over-attention in this field. He questions why one studies things outside this world when they are inaccessible and what this

[107] F. Berno, "Exploring Appearances: Seneca's Scientific Works" (2015): 85
[108] Seneca, *NQ* 1. *praef*. 2-3, 9-17
[109] M. Beagon, "The Curious Eye of the Elder Pliny" (2011): 74-5

world contains is not yet fully understood.[110] Seneca prizes the grand in considering the natural world, while Pliny finds the grandeur of nature in even the tiniest insect.[111] Seneca wants his reader to lose their fear of nature by learning rational causes, through which one better understands nature's organization and can better live according to its order as a wise man.[112] Pliny wants his reader to behold the world he or she inhabits to learn and discover the ways nature can benefit mankind and the Empire.

Conversely, in supporting this consideration of the wider universe Seneca dismisses the Empire,

> O quam ridiculi sunt mortalium termini! Ultra Istrum Dacos nostrum arceat imperium, Haemo Thraces includat; Parthis obstet Euphrates; Danuvius Sarmatica ac Romana disterminet; Rhenus Germaniae modum faciat; Pyrenaeus medium inter Gallias et Hispanias iugum extollat; inter Aegyptum et Aethiopas harenarum inculta vastitas iaceat.
>
> Oh how ridiculous are the boundaries of mortals! Let our command confine the Dacians beyond the Ister; let the Euphrates block the Parthians; let the Danube separate Samartian and Roman affairs; let the Rhine make a limit of Germany; let the Pyrenees raise their ridge between Gaul and Spain; let an uncultivated wasteland of sand lie between Egypt and Ethiopia.[113]

Seneca demonstrates little concern with the events of the Empire and its borders. He explains why. He says about the world, "punctum est istud in quo navigatis, in quo bellatis, in quo regna disponitis minima" "it is a point on which you sail, on which you wage war, on which you place the tiniest kingdoms."[114] Within the grand scope of the heavens and universe, Earth is a speck. Thus, one must withdraw themselves from public concerns to more properly appreciate nature's grand organization and the god which has designed it. At the beginning of book 4, Seneca

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[110] Pliny, *HN* 2.3-4
[111] Ib. 11.1
[112] F.R. Berno, "Exploring Appearances: Seneca's Scientific Works" (2015): 85
[113] Seneca, *NQ* 1. *praef*. 9
[114] Ib. 1 .*praef*. 10

commands Lucilius as procurator of Sicily to an extreme of this conduct, "Fugiendum ergo et in se recedendum est; immo etiam a se recedendum" "Therefore you must flee and retire into yourself; rather you must even retire from yourself."[115] Lucilius must not only give up his public concerns, but even personal ones. To properly consider nature on a grand scale, Lucilius must retreat from his own earthly perspective.

Pliny advocates no such disconnect, but rather sees considerations of nature as an act of public benefaction. As we have seen, Pliny praises the industry of ancient men for making discoveries in the use of nature and publicizing them, while criticizing those who selfishly hoard them. He claims that the Roman Empire's expansion has been integral to communicating and sharing these discoveries. The egotistic musings of nature that Seneca proposes for Stoic reflection are counter to such a public intellectual process. For Seneca, observations of nature benefit the self, while Pliny idealizes them as altruistic.

Furthermore, Seneca does not possess Pliny's obsessive obligation with his intellectual predecessors, and only occasionally mentions his authorities.[116] Seneca also does not celebrate the industry of ancient intellectuals, nor lament the current decline of intellectual pursuits.[117] The key difference is that Pliny's *Naturalis Historia* employs Roman historiographical mode through continuous consideration for recording past discoveries, while Seneca's *Naturales Quaestiones* contemplates the universe for private philosophical improvement. Seneca's text, however, does possess moralism with attacks against similar vices as those criticized by Pliny in the *Naturalis Historia*.[118] As well, while Seneca does not use historical *exempla* of moral excellence or

[115] Ib. 4. *praef*. 20
[116] E.g. Seneca, *NQ* 1.1.7, 1.3.7; cf. F. Berno "Exploring Appearances: Seneca's Scientific Works" (2015): 84
[117] He does, however, often refer to historical examples of natural phenomena, e.g. earthquake at Pompeii (6.1-3). (F. Berno "Exploring Appearances: Seneca's Scientific Works" (2015): 85
[118] F. Berno, "Exploring Appearances: Seneca's Scientific Works" (2015): 86-7

wickedness, he does reference historical occurrences of phenomena, such as an earthquake at Pompeii and the appearances of comets since Julius Caesar's death.[119] Perhaps in considering these aspects, there is room for further analysis of historiographical aspects in Seneca's text. Nevertheless, Seneca's use of nature purely for personal moral reflection, his lack of concern with the mundane, and a complete dismissal of the Empire's affairs place his work at odds with Pliny's. Furthermore, through this third characteristic, his text is at odds with Roman *historia* more generally. Seneca apathetically dismisses the Empire's affairs for personal Stoic reflection. Pliny characterizes his text as a product of and for the Roman Empire. Perhaps, Seneca intentionally used the term *quaestio* precisely to avoid the Roman connotations of *historia*.

[119] Seneca, *NQ* 6.1-3, 7.17.2

Chapter 5: The Obligation to Ancestry and Posterity

The *Naturalis Historia* as a Roman history is key to understanding the text's program and how it treats its sources. I will first examine in this chapter how Pliny references his *auctores*. This discussion will note that Pliny does not merely repeat his sources, but densely compiles, comments on, and analyzes them. The chapter will then proceed with discussion of Pliny's language of reference. Pliny uses different verbs to cite the *auctores*. These suggest varying degrees of truth to the information provided. I will then discuss how the two dominant verbs in references, *tradere* and *prodere*, are critical to recognizing how Pliny's text as a Roman history participates in the transmission of Roman tradition. I will then conclude the chapter with an examination of the optimism in the *Naturalis Historia* as it fits within the general function of Roman historiography. Pliny displays an optimism for posterity, which is similarly exhibited by Tacitus, which counters the narrative of intellectual decline typically used to characterize the text.

Pliny and His Sources

Pliny is unique among ancient authors for thoroughly citing his authorities. He details a list for the sources of each book, separating them out by Roman and *externi*. This latter group is largely Greek with some exceptions, e.g. King Juba of Numidia. He further divides the *externi* into a subgroup of *Medici* in the later books. These citations resulted in attempts in the late 18th and early 19th-centuries to reap the text for information about the lost sources. This practice, dubbed *Quellenforschung*, treated the *Naturalis Historia* as a compilation of extracts, attempting to dissect the text of these excerpts and attribute them to the various sources. These attempts, while ignoring Pliny's contributions, made the *Naturalis Historia* a literary Frankenstein formed of more authoritative fragments. Scholars attempted to unstitch the seams to identify and rebuild the

corpses. Information, however, in the *Naturalis Historia* is organized neither so neatly nor schematically. Pliny commonly provides information through occasionally lengthy series of brief statements. Some of these lists detail characteristics of an animal while others provide brief episodes of wondrous narratives.[1] The variety of the material provided in these passages suggests that they do not derive from a single source. They instead distinctly capture the compiling nature of the *Naturalis Historia*, neatly condensing information from multiple sources. This concision, however, makes the task of assigning these tidbits to specific sources difficult.

One of the most prominent efforts of *Quellenforschung* of the *Naturalis Historia* was Münzer's ambitious *Beiträge zur Quellenkritik der Naturgeschichte*.[2] Münzer, like Jex-Blake and Sellers a year before him, emphasized Varro's *Disciplinae* as the *Naturalis Historia*'s primary source, through which Pliny had indirectly retrieved most of his other authorities.[3] Although Münzer did not deny that Pliny had read any of the original texts, he argued that Varro had already compiled most of the material Pliny used. Varro is undeniably a prominent source in the *Naturalis Historia*. He goes unmentioned in only three of the 37 books.[4] The analysis, however, that Pliny's work was derivative of Varro is reductive and dismisses Pliny as a mere compiler.[5] In fact, Pliny demonstrates considerable attention to his sources, often criticizing and questioning their statements. He disagrees with many of his sources, which include Aristotle, that fish and other sea life do not breathe. He instead suggests the existence of an alternative respiratory system, providing a series of observations as well as the wonder of nature to support this theory. [6] He notes

[1] E.g. the characteristics of snakes (Pliny, *HN* 8.85) and hyenas (8.106)
[2] F. Münzer, *Beiträge zur Quellenkritik der Naturgeschichte des Plinius* (1897)
[3] Jex-Blake, K. and E. Sellers *The Elder Pliny's Chapters on the History of Art* (1896)
[4] Books 24, 27, & 32. Howe finds that Pliny finds the "image of authority" in Varro ("In Defense of the Encylopedic Mode: on Pliny's 'Preface' to the '*Natural History*' (1985): 573).
[5] Smith and Cornell have similarly noted the flaws of Münzer's reasoning ("Pliny the Elder" (2013): 102-3).
[6] Pliny, *HN* 9.16-7; He readdresses the topic of respiration regarding insects (11.5-8). Pliny, although possessing no proper evidence, was correct on both accounts.

that Fenestella's claim that pearls first entered Rome in the time of Sulla the Dictator as small and cheap must be incorrect since Aelius Stilo states that large pearls received the Latin name *unio* during the Jugurthan Wars.[7] Pliny humorously remarks about the claim that mice of the Black Sea possess a discerning palate, "auctores quonam modo intellexerint miror" "I marvel by what method the authorities learned this."[8] He similarly wishes that his authorities had recorded how they determined that starfish are calescent.[9] He displays considerable attention while reporting that Domitius Ahenobarbus gave a show of 100 Ethiopian hunters and 100 Numidian bears in the circus.[10] Pliny notes that the record of "Numidian" bears is surprising since there are no bears in Africa.[11] In a learned display, Pliny directly denies Varro on the history of paper, referring to earlier contradicting authorities: the *Annales* of Cassius Hemina (c.146 BCE) and those of L. Calpurnius Piso Frugi (fl. 149-120 BCE). Pliny's considerable use of L. Calpurnius Piso's annals likely arises from their moral character, and this evidences thought on Pliny's part in selecting material for capturing a moralistic tone.[12]

Such criticism of the sources also counters the assumption of Pliny's credulity stemming from his inclusion of *mirabilia*. To some, Pliny was gullible to repeat reports of giant serpents, monstrous races of men, and Cleopatra drinking a large pearl dissolved in vinegar.[13] Scholars more

[7] Ib. 9.123
[8] Ib. 8.32
[9] Ib. 9.183 This mythical quality of the starfish seems to have arisen from the notion that the species reflected characteristics of actual stars, and so possessed their extreme heat.
[10] Ib. 8.131
[11] Pliny in his observation is not entirely correct. If Domitius Ahenobarbus had acquired bears from Africa, these must have been the Atlas bear (*ursus arctos crowtheri*), which became extinct in the mid-19th-century (S. Calvignac et al. "Ancient DNA evidence for the loss of a highly divergent brown bear clade during historical times" (2008)). It is possible that the slaughter of 100 Atlas bears had dwindled the population to endangerment.
[12] C. Smith and T. J. Cornell, "Pliny the Elder" (2013): 103
[13] Jones has recently argued that the last example of Cleopatra dissolving the pearl in vinegar is possible ("Cleopatra's Cocktail" (2010)).

recently have noted that *mirabilia* are commonly reported with a transfer of authority.[14] The catalog of wondrous races of men is preceded by,

> nec tamen ego in plerisque eorum obstringam fidem meam potiusque ad auctores relegabo, qui dubiis reddentur omnibus, modo ne sit fastidio Graecos sequi, tanto maiore eorum diligentia vel cura vetustiore.
>
> Nevertheless, I will not oblige my veracity in most of these matters, and instead will consign it the authorities, who will be given in all uncertain matters, but do not let it be a nuisance to follow the Greeks so much greater in their diligence or older in their care.[15]

Pliny states that he will divert any uncertain matters to his sources' authority rather than letting it harm his own integrity. Pliny employs this method throughout the text. In fact, this is a common tactic for recounting *mirabilia* in all paradoxography, creating a *caveat lector*.[16] Pliny's claim about a source's statement is true provided his citation is correct; he merely must report what they say leaving judgment to his reader. Similarly, *auctores* occasionally contradict each other, and Pliny will provide no answer to the debate, leaving the decision to his reader.[17]

Pliny, however, does not abstain from stating his own skepticism. He disbelieves stories of animals nursing exposed infants, including the legend of Romulus and Remus.[18] He wholly rejects stories of werewolves.[19] He similarly expresses doubts. He says about the Arabian phoenix, "scio haut an fabulose" "I do not know whether it is mythical," suggesting it may not exist.[20] Doody notes that Pliny's reputation for credulousness results from his misconstrued reception rather than from the text itself. Aulus Gellius criticized Pliny for including *mirabilia*; however, these are not

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[14] M. Beagon, *The Elder Pliny on the Human Animal:* Natural History, book 7 (2005): 121; T. Murphy, *Pliny the Elder's 'Natural History': the Empire in the Encyclopedia* (2004): 89;
[15] Pliny, *HN* 7.8
[16] J.S. Romm, *The Edges of the World in Ancient Thought: Geography, Exploration and Fiction* (1992): 92ff
[17] V. Naas, *Le Projet encylopédique de Pline làncien* (2002): 156
[18] Pliny, *HN* 8.61
[19] Ib. 8.80
[20] Ib. 10.3

unusual for a *historia*.[21] Indeed, Aulus Gellius, although reluctant, recounts the same wondrous races of beast-men which he retrieves from Pliny.[22] As mentioned above, scholars have articulated other reasons for the inclusion of *mirabilia*. Naas notes that architectural *mirabilia* serve a moral function.[23] She also argues that the *mirabilia* exhibit Rome's control over the marvels of nature and the remote corners of the Earth.[24] Beagon similarly comments on the Roman desire to bring *mirabilia* to the city.[25] Murphy argues that they serve both to vary the work's texture and provide a popular aristocratic interest to ensure the text's popularity.[26] Titus observed the unusual rites at the Temple of Venus on Paphos to delay his journey to Rome while Otho and Vitellius were still fighting.[27] Mucianus, Vespasian's steward for the city of Rome, appears to have written a paradoxography, a collection of wonders, which Pliny sources throughout the *Naturalis Historia*.[28] Pliny the Younger's *Epistulae* exhibit his own and implies his addressees' interests in *mirabilia*. In two letters to Licinius Sura, Pliny asks about the possible cause for a spring's grotto emptying and filling throughout the day and whether Licinius believes ghosts exist, telling the story of Curtius Rufus' encounter with a giant spectral woman.[29] In another letter to Caninus Rufus, Pliny the Younger tells the story of a friendly dolphin in Hippo.[30] Naas argues that such interests in

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[21] A. Doody, *Pliny's Encyclopedia: the reception of the Natural History* (2010): 35
[22] Aulus Gellius, 9.4.7; T. Murphy, *Pliny the Elder's 'Natural History': the Empire in Encyclopedia* (2004): 92
[23] V. Naas, *Le Projet encylopédique de Pline làncien* (2002): 354-5
[24] V. Naas, "Imperialism, *Mirabilia*, and Knowledge: Some Paradoxes in the *Naturalis Historia* (2011): 62-5
[25] M. Beagon, "Situating Nature's Wonders" (2007): 26
[26] T. Murphy, "Pliny's *Naturalis Historia*, the prodigal text" (2003): 305; *Pliny the Elder's Natural History* (2004): 57-8
[27] Tacitus, *Hist.* 2.1-4
[28] R. Ash, "The Wonderful World of Mucianus" (2007): 1
[29] Ib. 4.30, 7.27
[30] Pliny, *Epist*. 9.33 on the friendly dolphin in Hippo Diarrhytus. The *Naturalis Historia* tells of the same dolphin. Pliny the Elder, however, implicates the proconsul Flavianus for pouring perfume on the animal and making it sick, while the Younger blames the proconsul's legate Octavius Avitus. The Younger may have heard the story from his uncle or retrieved it from the *Naturalis Historia* or his uncle's notes, but the alteration could suggest the Younger obtained the story directly from Mucianus' account. Yet this still leaves either the Elder or the Younger mistaken on the guilty party. The proconsul may have ordered his legate to pour the perfume. Perhaps the Elder felt who had given the command was guilty, while the Younger considered the actual perpetrator at fault. Cf. Sherwin-White, who believes Pliny the Younger had no interest in his uncle's work (*The Letters of Pliny. A Historica and Social*

mirabilia reflect a decline of the sciences in the early Empire, and thus the *mirabilia* are compensation for lack of intellectual novelty in Pliny's text.[31] Beagon has more positively suggested that the *mirabilia* in the *Naturalis Historia* are manipulative, an enticement for the curious audience to learn the rest about nature.[32] Doody has commented that the use of *mirabilia* to end a section is similar to other *historia*.[33] Beagon also provides an enticing observation of the *mirabilia* for the text as Roman historiography. She notes that *mirabilia* are typically biological, usually being strange creatures. This meant that a wonder only lasted as long as the creature was alive, and its remains had not entirely decayed. Without modern refrigeration, such wonders would soon disappear in Italy's climate.[34] Hence Pliny provides a record of disappearing *mirabilia*.

Pliny also provides examples of autopsy. He typically introduces these with a first-person *videre*. Pliny records seeing a meteoric stone in the territory of the Vocontii.[35] He witnessed a phenomenon of starlight clinging to the javelins of soldiers on guard duty.[36] He has seen living sheep with dyed wool.[37] The Chauci of Northern Germany are introduced, "visae nobis" "seen by us."[38] Pliny stresses that he has seen nearly every plant species he mentions in the gardens of Antonius Castor.[39] He provides detailed descriptions of Spain, its mines, and the mining process.[40]

Commentary (1966): 514); Gibson argues otherwise ("Elder and Better: The *Naturalis Historia* and the *Letters* by Pliny the Younger" (2011): 191-5

[31] V. Naas, "Imperialism, *Mirabilia*, and Knowledge: Some Paradoxes in the *Naturalis Historia* (2011): 67-9

[32] M. Beagon, "The Curious Eye of Pliny the Elder (2011): 79

[33] A. Doody, *Pliny's Encyclopedia: the reception of the* Natural History (2010): 36

[34] M. Beagon, "Situating Nature's Wonders" (2007): 38

[35] Pliny, *HN* 2.150

[36] Ib. 2.101

[37] Ib. 8.197

[38] Ib. 16.2

[39] Ib. 25.9

[40] R. Syme, "Pliny the Procurator" (1969): 211; M. Beagon, *Roman Nature: The Thought of Pliny the Elder* (1992): 4-5

He likely retrieved this information while he was procurator of Spain.[41] There are numerous other personal additions Pliny provides.[42]

Pliny does not merely echo his sources. He condenses, articulates, compares, and criticizes their statements. He includes wondrous *mirabilia* for multiple reasons, but especially because these wonders are notable information his sources provided and therefore merit being recorded. Lastly, he includes his own observations. These all evidence an attentive effort in the composition of the *Naturalis Historia*. Pliny clearly had some vested interest in the natural world. He was certainly curious, and perhaps foolish, enough to perish in the eruption of Mt. Vesuvius.

Pliny's Language of Reference

Those who read the *Naturalis Historia* in Latin will soon become encumbered by Pliny's continuous language of reference. Although Pliny is willing to provide information without citation, suggesting it meets his approval, many statements are qualified with a cited source or the suggestion of one. The result is repetitive prose, but citation is an emblem of pride and a moral obligation for Pliny,

> argumentum huius stomachi mei habebis quod in his voluminibus auctorum nomina praetexui. est enim benignum, ut arbitror, et plenum ingenui pudoris fateri per quos profeceris, non ut plerique ex is, quos attigi, fecerunt. scito enim conferentem auctores me deprehendisse a iuratissimis e proximis veteres transcriptos ad verbum neque nominatos, non illa Vergiliana virtute, ut certarent, non Tuliana simplicitate, qui de re publica Platonis se comitem profitetur, in consolatione filiae "Crantorem", inquit, "sequor," item Panaetium de officiis, quae volumina ediscenda, non modo in manibus cotidie habenda, nosti. obnoxii profecto animi et infelicis ingenii est deprehendi in furto malle quam mutuum reddere, cum praesertim sors fiat ex usura.

[41] His nephew attests the posting (Pliny, *Epi.* 3.5.17).
[42] A more complete collection of examples of autopsy can be found in R. Syme, "Pliny the Procurator" (1969): 211-8; who largely repeates those of F. Münzer, *Beiträge zur Quellenkritik der Naturgeschichte des Plinius* (1897): 103. Both use these to argue for potential procuratorships Pliny held in addition to that of Spain, attested by his nephew.

> You will consider it proof of my refinement that in these volumes I have prefixed the names of the sources. For it is a kind thing, I think, and full of candid modesty to confess through whom you have profited, not as those of whom many I have touched upon, did. Know that I realized in comparing the sources that the old ones had been copied and not named by the most trustworthy and recent. They did this not to contend as in that Vergilian valor, not from Ciceronian simplicity, who calls himself a companion of Plato in *De republica*, in the *Consolatio* of his daughter said, "I follow Crantor," and said the same for Panaetius in his *De officiis*, which, you know, are volumes that must be studied and held in one's hands daily. Truly it is of a guilty mind and unhappy spirit to prefer to be caught in theft to reporting an exchange, especially when capital comes from interest.[43]

By citing his sources Pliny feels that he is acknowledging an obligation to the *auctores*. He disdains other authors who copy their sources and fail to note this debt. Such an obligation to the *auctores* causes him even to repeat material reluctantly. While discussing gems he says,

> De lyncurio proxime dici cogit auctorum pertinacia, etiamsi non electrum id esse contendunt lyncurium, tamen gemmam esse volunt … ego falsum id totum arbitror nec visam in aevo nostro gemmam ullam ea appellatione. Falsum et quod de medicina simul proditur, calculos vesicae poto eo elidi et morbo regio succurri, si ex vino bibatur aut spectetur etiam.
>
> The stubbornness of the sources compels me to discuss the lyncurium next; even if they argue that lyncurium it is not amber, they still consider it a gem … I consider it false, nor has any gem with that title appeared in our era. What is reported about its medicinal property is also false: that its potion breaks bladder stones and to treat jaundice when drunk in wine or even looked at.[44]

Pliny does not want to report statements about the *lyncurium*, a gem formed from lynx's urine, since he believes that they are entirely false. Nevertheless, his sources' obstinacy compels him. This reluctant reference suggests that enough sources are persistent in the claims about the gem that Pliny was required to include this information. He also recognizes that some authors have reasons for omitting citations, such as Vergil for poetic grandeur, and Cicero, who at least acknowledges his predecessors. For others to leave an *auctor* unmentioned is a theft (*furtum*). Pliny

[43] Pliny, *HN praef.* 21-2
[44] Ib. 37.52-3

considers such thievery nonsense precisely because it is beneficial to acknowledge one's authorities. Murphy observes that the concluding financial metaphor suits aristocratic ideals of money lending. Pliny borrows intellectually to disseminate knowledge publicly, and the interest accrued for the *auctor* is fame.[45]

Indeed, Pliny is thorough in acknowledging his debt, and here we shall examine key phrases he uses to refer to his sources. In his analysis of Propertius, David Ross coined the term "Alexandrian footnote" where a "ferunt" or "dicitur" indicated a literary allusion.[46] The *Naturalis Historia* abounds in such footnotes. No previous scholar, however, has analyzed Pliny's language of reference. Only Naas has noted the common use of the phrase *tradere, auctor,* and *invenire*, noting that *tradere* is also used for mythical and legendary material in the text.[47] Pliny's phrases, however, convey subtleties about the material he is reporting. I will analyze the most common phrases used in the text. These are *auctor esse*, *tradere*, and *prodere*. Pliny also occasionally uses *certum est*, which commonly lacks a source.[48] Other phrases also appear, such as *aiere*, *dicere*, and *fere*.[49] I have noted that *putare* commonly refers to an *auctor*'s unverified belief. Pliny's own criticisms of the claim typically follow a reference using this verb.[50] *Credere* bears a similar lack of veracity.[51] *Mirari* demonstrates candid amazement or disbelief.[52] Pliny's entire method of citation merits further examination; however, this study focuses on these phrases because they reflect the text's historical project.

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[45] T. Murphy, *Pliny the Elder's 'Natural History': the Empire in the Encyclopedia* (2004): 65
[46] D. Ross, *Backgrounds to Augustan Poetry: Gallus, Elegy, and Rome* (1975): 78
[47] V. Naas, *Le Projet encylopédique de Pline làncien. Rome* (2002): 159
[48] E.g. 2.32, 2.56, 7.33, 8.6, 18.307, 20.32, 24.19
[49] E.g. *Aieret*: 4.120, 18.42; *Fere*: 9.182, 10.7, 11.143
[50] E.g. 9.115, 10.166, 11.69, 11.226
[51] E.g. 8.128 Pliny calls Theophrastus' belief about boiled bear flesh continuing to grow "mirum dictu" "surprising to say"; 10.40, disproven at 25.14; 37.53
[52] E.g. 8.32; cf. 8.128

Auctor esse is one of the most common and plain reference structures in the *Naturalis Historia*.[53] Pliny is not unique in this citation style. Livy, Celsus, and Columella also use the phrase; although Pliny dominates all others in its use.[54] Although only the Roman sources are identified as *auctores* in book 1, the term also refers to the *externi* (*auctores*) in the text.[55] Pliny uses two constructions. First, the *auctor*'s name accompanies the phrase followed by his statement(s) in indirect speech. The second construction places the information in the main clause with the source's name placed in a subordinate clause of "ut auctor est." If the text references multiple sources ("auctores sunt"), they are typically unnamed. This is common for most references to plural authorities. It appears that Pliny did not wish to trouble his reader with lists of *auctores* in the text, or, when multiple sources agree, it was not necessary to specify who makes the claims. If sources diverge, then Pliny specifically associates statements.[56] Related to this construction is the phrase "apud auctores."[57] This phrase typically accompanies *invenire*, but a passive *reperere* also appears. "Invenio/invenimus" alone occurs even more frequently in the text for a combined total of 78 times.[58] *Tradere* and *prodere* are abundant in the text. *Tradere* appears a grand 639 instances. *Prodere* occurs 196 times. Their usage is like *auctor esse*. If in the singular, the text provides a name. If in the plural, it often omits identification or provides a *quidam*, leaving the sources obscure.[59] *Tradere* and *prodere* also appear in the same indirect speech and subordinate

[53] A quick search on PHI finds the exact phrase "auctor est" occurs 130 times in the text, "auctores sunt" only occurs 9 times. This of course does not account for the occasions where Pliny merely names an authority followed by an indirect statement.
[54] Livy uses it the most frequently after Pliny at a mere 14 times: 2.32.3, 2.58.2, 4.7.12, 6.42.5, 10.37.13, 21.47.4, 25.39.12, 31.7.15, 37.48.1, 38.23.8, 38.41.12, 38.50.5, 44.15.1, 45.43.8; Celsus, *Med.* 5.18.14a; 5.28.7a; 7.7.6b; Columella, *Rust.* 12.46.5
[55] E.g. 8.104 (Theophrastus); 8.156 (Juba of Numidia), 8.191 (Homer)
[56] E.g. 3.64: Pliny names 6 separate names for Euboea from 6 different sources; 3.124: Cato is unable to name the etymology for the Orumbivi, but Cornelius Alexander claims a Greek origin for "those who live in the mountains"
[57] This phrase occurs 19 times in the text.
[58] Invenio: 49; invenimus: 29. The similar phrases "habeo/habemus auctores" occur once each (9.10, 10.106).
[59] 2.183 However, he is willing to provide names 3.4

ut constructions.[60] Both verbs also occur in the passive with the source potentially provided in the ablative.[61]

The thorough use of these verbs is crucial for articulating the text as a historiographical project. *Tradere* and *prodere* are both compounds formed from *dare*, respectively meaning "to give over" and "to give forth."[62] These verbs establish a process of the *auctores* granting the information. Pliny does not provide a first-person dative for an indirect object in his constructions; however, he occasionally uses the term *accipere* followed by an indirect statement to introduce the material.[63] Such use of *accipere* establishes a position of reception on Pliny's part in relation to the information provided by his sources. The "auctores tradunt/produnt" while Pliny "accipit." Pliny's use of *invenire* similarly places him in a position of reception, as he discovers the material left by his precursors. In truth, the fact that Pliny can often omit his sources' names stresses this process of transmission. These verbs oscillate between the present and perfect tense, and there is no indication of any difference in meaning. Aristotle will appear with a present, while fifty passages later L. Piso, Aristotle's junior by 250 years, will earn a perfect.[64] Such loose use of the tenses grants an ambiguous sense of time to the material of the *auctores*. It makes the process of transmission active by bringing the *auctores* forward. It is as if Aristotle, Varro, and Piso are there, directly granting their knowledge to Pliny.

[60] E.g. ut tradere: 5.57, 6.200, 15.135; ut prodere: 4.60, 5.83
[61] E.g. 4.83; 4.99, 7.213, 17.267
[62] "trado" 1; "prodo" 1 (Lewis and Short)
[63] Ib. 2.222, 6.34, 7.51, 7.78, 8.153
[64] Ib. 2.91 ("Aristotle tradit"), 2.140 ("tradidit L. Piso")

Nor Pliny is the terminus of this transmission. Instead, he envisions himself as continuing it. Pliny uses both *prodere* and *tradere* about his own writing of the *Naturalis Historia*. While discussing the motion of the planets Pliny notes, "in quibus aliter multa quam priores *traditurі* fatemur ea quoque illorum esse muneris qui primi quaerendi vias demonstraverint" "Although I am about to give over much differently than the predecessors, I confess even those things are the kindness of those who first showed the ways of investigating."[65] Pliny identifies that he is about to *tradere* his own information regarding the movement of the planets. While discussing remarkable crows, he says, "nunc quoque erat in urbe Roma, haec *prodente* me, equitis Romani cornix e Baetica primum colore mira admodum nigro dein plura contexta verba exprimens et alia atque alia crebro addiscens" "Also, as I was *giving forth* these volumes, there was now in Rome a Roman *eques*' crow from Baetica remarkable first because its absolutely black color, and second for expressing many woven together words and frequently learning more and more."[66] He specifies *nunc* as "haec prodente me" "while I was giving forth these volumes." Pliny precisely uses *prodere* to indicate his act of writing the *Naturalis Historia*. When introducing the discussion of plant blights, he states, "de his nunc dicemus a nullo ante nos *prodita*, priusque causas reddemus" "about these we now will say what none have given forth before us, and we will first report their causes."[67] While here the agent of *proditus* is *nullus*, Pliny implies with the use of another *dare* compound, *reddere*, that he will be first to *prodere* the information.

Indeed, in noting that measurements of cloud height are uncertain, Pliny provides a brief programmatic statement about the *Naturalis Historia* at large using *prodere*, "sed prodenda quia sunt prodita" "but these things must be given forth since they have been given forth."[68] This

[65] Ib. 2.62
[66] Ib. 10.124
[67] Ib. 18.279
[68] Ib. 2.85

statement acutely defines how Pliny defines the *Naturalis Historia* as a text of transmission. Since information has been given forth once, it must be given forth again by Pliny. He recognizes that some information is uncertain, as with the height of clouds, or incorrect, such as about the planets' movements, but it is still necessary that these statements persist. The ancients, Pliny claims, recorded information for perpetuity. He says about ancient research that "nihil deinde occultatum quodque non prodesse posteris vellent" "then nothing was hidden which they did not wish to give forth to posterity."[69] One can only adore "in tradendo benignitatem" "their kindness in giving over."[70] The *auctores* recorded such information to be handed down to posterity, and Pliny will respect such a desire. Such an effort of preservation is counter to a scientific method which aims solely to identify truth. The *Naturalis Historia* still aims for veracity in reviewing the *auctores*, but its primary schematic is a history meeting an obligation to record preceding statements. Pliny's text functions according to the aim of *historia* to perpetuate the *mos maiorum*.

Of course, the information Pliny puts forth is still subject to his personal scrutiny. He expresses an ideal of "prodenda quia sunt prodita," but he is not as holistic in his treatment. Beagon has noted Pliny willingly identifies his omission of material, particularly about medicine and magic.[71] He refuses to name poisons, abortives, and contraceptives, which all seem to be excluded because they are against the natural order. Poisons are not for *iuvanda vita* (helping life); they are for quite the opposite. Indeed, despite that Pliny wishes to omit particularly monstrous medical treatments, he still provides some, suggesting that they nevertheless will allow one to live longer.[72] Perhaps Pliny errs, including material he intended to omit. Alternatively, he includes the

[69] Ib. 25.1
[70] Ib. 27.1
[71] M. Beagon, *Roman Nature: the thought of Pliny the Elder* (1992): 216-21
[72] Pliny, *HN* 28.5-9

information because it is to some degree beneficial. Pliny similarly makes intellectual criticisms of cosmological theories; however, he still reports these findings and affords them some respect.[73]

Nevertheless, there is a similar emphasis on preservation elsewhere in the *Naturalis Historia*. In book 14 Pliny comments, "sed nos oblitterata quoque scrutabimur, nec deterrebit quarundam rerum humilitas, sicuti nec in animalibus" "But we will also examine thoroughly things forgotten, nor will the humility of any topics deter me, just as it did not in [the study of] animals."[74] Pliny aims to find and record forgotten material, nor will he let minor topics be ignored either. His reference to such a practice in his treatment of animals refers to his inclusion of insects. At the beginning of book 11 Pliny asks his readers not to allow their dislike of insects to affect their approval of the text's information because "in contemplatione naturae nihil possit videri supervacuum" "nothing in the contemplation of nature can appear unnecessary."[75] Pliny's identification of cities no longer existing also stems from an attempt to record them for posterity. Thus, Pliny names in book 6 the cities destroyed by Aelius Gellius in Arabia which no previous *auctor* has recorded.[76] Pliny directly connects the process of *tradere* and *prodere* to memory by providing *memoria* in the dative as the verbs' indirect object. Thus, Delos and Rhodes "produntur memoriae" "are given forth to memory" to have been born from the sea.[77] "Pliny reports, "proditurque memoriae" "It is given forth to memory" that an island surrounded by poisonous fish appeared near the Aeolian islands.[78] He introduces a section about a particularly clever raven with "tradendum putavere memoriae quidam" "some thought it should be given over to memory."[79]

[73] Beagon, *Roman Nature: the thought of Pliny the Elder* (1992): 44-6
[74] Ib. 14.7
[75] Ib. 11.3
[76] Ib. 6.160
[77] Ib. 2.202
[78] Ib. 2.203
[79] Ib. 10.125

Memoria is vital in the *Naturalis Historia*. Pliny calls *memoria* "necessarium maxime vitae bonum" "the greatest essential good of life."[80] However, this necessity of life is also the most easily harmed quality of the mind, "nec aliud est aeque fragile in homine" "nothing else is as equally fragile in humanity."[81] Illness and injuries can harm one's memory, but even rest, sleep, and an unoccupied mind can impair this faculty. Perhaps this explains Pliny's own statement "vita vigilia est" "life is being awake." [82] Restfulness and sleep can impair the most vital aspect of the human mind.

Such an obsession with memory reflects the Roman epigraphic habit.[83] It also suits Vespasian's own contemporary efforts to restore three thousand bronze inscriptions destroyed in the great fire of Rome in 69 CE.[84] Moreover, Pliny establishes that recording is necessary because of the intellectual decline in his era. He claims that some of the authors he cites are rarely read.[85] As we have seen, Pliny also laments the intellectual idleness of his contemporaries. Some have no interest, "immo ne veterum quidem inventa perdisci" "On the contrary not even the discoveries of the ancients are studied."[86] Others keep the information to themselves, letting it perish in the isolation of their mind.[87] Pliny counters this destructive behavior by recording, publishing, and transmitting information through text.

Moatti observes that Roman historiography developed in the late Republic to codify the past. Antiquarian writing arose at the same time, but, Moatti articulates, for interpreting the law.[88]

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[80] Ib. 7.88
[81] Ib. 7.90
[82] Ib. *praef*. 18
[83] E. Meyer, "Explaining the Epigraphic Habit in the Roman Empire: The Evidence of Epitaphs (1990): 76
[84] Suetonius, *Vesp*. 8.5: C. Williamson, "Monuments of Bronze: Roman Legal Documents on Bronze Tablets (1987): 165
[85] Pliny, *HN praef*. 17
[86] Ib. 2.117
[87] Ib. 25.2
[88] C. Moatti, *The Birth of Critical Thinking in the Republican Rome* (2015): 96, 100ff

Nevertheless, both developed in the place of oral transmission to record and rationalize the knowledge and traditions of the Roman ancestors. Moatti aptly says, "at this point tradition becomes a text."[89] Pliny's use of *prodere* aligns the transmission of ancestral material through writing precisely in this manner. *Prodere* commonly refers to a text's publication. Henderson has aptly called the *Naturalis Historia* the book on books. Pliny himself depends on the production literature by his *auctores*, and he relies on this same production again to transmit both their and his own findings. Murphy overzealously claims that Pliny could have obtained all his material in the library.[90] Such a claim ignores Pliny's observations; however, writing is critical to Pliny. It comes first in the list of human inventions.[91] Pliny calls *memoria* most necessary for life; however, it is also the most fragile attribute of the human mind. Writing compensates for that vulnerability. It is a key device in preserving tradition. Hence every citation directly to the *auctores* is in the present. "Auctor est" rather than "auctor fuit" establishes a continuity of the authorial/authoritative role. An *auctor* does not need to be correct; in fact, they are likely to be corrected, but that does not end their position as one. Moreover, all the material the "auctores tradunt" is done through text. Hence they also "produnt." Pliny's language in the direct treatment of his sources reflects precisely how in Rome the process of transmitting tradition (*tradere*) had become united with historical writing (*prodere*).

For Those to Come

Roman history, however, is not merely a recollection or a record of the past. Nevertheless, scholars find a sense of completion in Pliny's work. Conte calls the *Naturalis Historia* an inventory of an organized empire ready to be cataloged. The Roman Empire had reached its limits, and its assets

[89] Ib. 106
[90] T. Murphy, *Pliny the Elder's 'Natural History': the Empire in Encyclopedia* (2004): 5
[91] Pliny, *HN* 7.92

needed to be recorded in a balance sheet.[92] Naas similarly, although commenting that encyclopedic projects are inherently never finished, calls the text a "bilan" since science in the 1st-century CE had reached its limit.[93] Naas also argues that Pliny portrays intellectual endeavors as unable to flourish in the principate because the *liberales artes* cannot exist in a world without *libertas*.[94] These arguments stem from Pliny's narration of intellectual activities thriving in the era of the Hellenistic kings, which activites Roman unification have since hindered,

> antea inclusis gentium imperiis intra ipsas adeoque et ingeniis, quadam sterilitate fortunae necesse erat animi bona exercere, regesque innumeri honore artium colebantur et in ostentatione has praeferebant opes, inmortalitatem sibi per illas prorogari arbitrantes, qua re abundabant et praemia et opera vitae. posteris laxitas mundi et rerum amplitudo damno fuit.
>
> Previously when kingdoms of nations and their geniuses were enclosed among themselves, from this sterility of fortune it was necessary to exercise the goods of the mind. Countless kings cultivated in the renown of the arts and put these resources forth on display thinking that through these they prolonged their immortality. Because of this, the spoils and works of life used to overflow. The availability of the world and things have been a great harm for later generations.[95]

Pliny continues to explain how magistrates and senators began to be selected according to wealth, which resulted in a lack of attention towards the *liberales artes*. He concludes, "ergo, Hercules, voluptas vivere coepit, vita ipsa desiit" "And so, by Hercules, pleasure has begun to live, while life itself has stopped."[96] Naas notes that Tacitus makes similar laments about his contemporaries' declining interest in conserving the past as a component of the imperial regime.[97]

It is true, as has been discussed above, that Pliny bemoans the intellectual inertia among his contemporaries. However, Pliny stands in stark opposition to this alleged decline by writing

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[92] G. Conte, *Genres and Readers: Lucretius, love elegy, Pliny's Encyclopedia* (1994): 70-5
[93] V. Naas, *Le Projet encylopédique de Pline l'ancien* (2002): 400
[94] Ib. 408-10
[95] Pliny, *HN* 14.4-5
[96] Ib. 14.6
[97] V. Naas, *Le Projet encylopédique de Pline l'ancien* (2002): 409

the *Naturalis Historia*. As we have seen, Roman *historia* serves a didactic purpose. This education helped to counter the narrative of decline typical in Roman writing. However, history did not aim to maintain traditions or the *mos maiorum* blindly, but to provide positive and negative examples for the improvement of future generations. Moatti finds that historical and antiquarian writing served precisely to record and rationalize tradition. This meant tradition was respected, but not that it was immune to criticism. In fact, analysis was necessary to validate it.[98] Narratives of decline, which abound in Roman historiography, act precisely as the impetus for this improvement. If current conditions were perfect, why would there be a need for improvement? Pliny too situates his work within a period of intellectual decline, but this is precisely because his text attempts to provide a corrective stimulus to intellectual pursuits. Nor, as we will see, does Pliny cite the *auctores* believing or hoping that the *Naturalis Historia* will be the final product, as if it is a last resort attempt to prevent information from being lost.

Paired with the notion of the text's totality, Naas similarly argues that Pliny does not evidence intellectual progress. She notes that Stoic doctrine does not believe in intellectual progress but that the intellectual forces of humanity are already infinite.[99] Stoic thought influences Pliny in the *Naturalis Historia*, but he is not a strict adherent of its doctrine like Seneca.[100] As noted previously, Naas further argues that the *mirabilia* in the text reflect a decline of the sciences during the 1st-century CE.[101] In contrast, Beagon has observed that Pliny is more optimistic about the development of knowledge about nature, as he himself provides his own and recent observations, such as Columella's new method of grafting.[102] Murphy alternatively argues that

[98] C. Moatti, *The Birth of Critical Thinking in the Republican Rome* (2015): 184
[99] V. Naas, *Le Projet encylopédique de Pline l'ancien* (2002): 402, 406
[100] M. Beagon, *Roman Nature: the thought of Pliny the Elder* (1992): 46-9; "The Curious Eye of Pliny the Elder" (2011): 73-4
[101] V. Naas, "Imperialism, *Mirabilia* and Knowledge: Some Paradoxes in the *Naturalis Historia*" (2011): 67
[102] M. Beagon, *Roman Nature: the thought of Pliny the Elder* (1992): 57-63

Pliny envisions *natura* as finite and unchanging and instead the level of knowledge itself on nature fluctuates.[103] However, this seems untrue since Pliny repeats the Greek phrase "semper aliquid novi Africam adferre" "Africa always produces something new."[104] If Africa is a constant source of new creatures, nature is not finite.

Pliny feels his work is incomplete. He notes this by appealing to Greek painting,

> et ne in totum videar Graecos insectari, ex illis nos velim intellegi pingendi fingendique conditoribus quos in libellis his invenies absoluta opera, et illa quoque quae mirando non satiamur, pendenti titulo inscripsisse, ut Apelles faciebat aut Polyclitus, tamquam inchoata semper arte et inperfecta, ut contra iudiciorum varietates superesset artifici regressus ad veniam, velut emendaturo quicquid desideraretur si non esset interceptus
>
> And so that I do not seem to speak completely ill of the Greeks, I would like to be understood among those founders of painting and sculpture whom you will find in these books inscribed their finished works, even those which we have not had our fill admiring, with a hanging title, such as "Apelles" or "Polyclitus was making me." It is as if their art were always begun or incomplete, so that against the fickleness of judges a reprieve to favor remained for the artist, as if he desired to correct anything, if he were not hindered.[105]

Pliny desires his work to possess a similar sense of incompletion. He refers to the text's imperfection earlier in the preface, "nec dubitamus multa esse quae et nos praeterierint; homines enim sumus et occupati officiis, subsicivisque temporibus ista curamus, id est nocturnis, ne quis vestrum putet his cessatum horis." "I do not doubt that there are many things which have escaped us, for I am human, busy with duties, and treat those matters in my spare hours, that is at night, so that none of your people think that I have ceased in these hours."[106] Pliny admits that he has neglected some material, supplying human error and the text's leisurely production as excuses. Such a deficiency provides space for improvement, but Pliny himself will not do this. Instead, he

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[103] T. Murphy, *Pliny the Elder's 'Natural History': the Empire in Encyclopedia* (2004): 62
[104] Pliny, *HN* 8.42; Aristotle, *HA* 606b20
[105] Pliny, *HN praef*. 26
[106] Ib. *praef*. 18

leaves it to posterity, "proinde occupantibus locum faveo, ego vero et posteris, quos scio nobiscum decertaturos, sicut ipsi fecimus cum prioribus" "Hence I am favorable to those seizing the spot. In fact, I also favor those coming after me, whom I know will contend with us, just as we have done with our forbearers."[107] Pliny provides the *locus* first mentioned by not publishing his history, leaving a literary space for others to seize. His next comment about favoring posterity is more generally aimed at those who will write after him. These successors will contend with Pliny and his contemporaries just as they have competed with their own precursors. Immediately after this passage Pliny justifies his citation of the *auctores*, and so Pliny unites the idea of generational competition with his own presentation of the *auctores*. He envisions the *Naturalis Historia* contending with its sources as its *priores*. Thus, he acknowledges that he is favorable to the notion of posterity outdoing his work, because, as he admits, it is not perfect.

Pliny's comments about the competition between generations find echoes elsewhere in the text. While discussing theories of planetary movements, he orders the same generational optimism, "in quibus aliter multa quam priores traditurus fatemur ea quoque illorum esse muneris qui primi vias quaerendi demonstraverint, Modo ne quis desperet saecula proficere semper" "Although I am about to give over much differently than my predecessors, I confess even those things are the kindness of those who first showed the ways of investigating. Only no one should lose hope that the generations always advance."[108] Pliny explains that his own statements differ from his predecessors due to intellectual developments; however, his jussive stresses an outlook that posterity will again advance. We have seen in the previous chapter that Pliny similarly refers to the nobility of the ancients for passing on information to their descendants.

[107] Ib. *praef.* 20
[108] Ib. 2.62

Nor is Pliny alone in such progressive statements. Tacitus has Aper voice a similar perspective on oratory in the *Dialogus de oratoribus*,

> Agere enim fortius iam et audentius volo, si illud ante praedixero, mutari cum temporibus formas quoque et genera dicendi. Sic Catoni seni comparatus C. Gracchus plenior et uberior, sic Graccho politior et ornatior Crassus, sic utroque distinctior et urbanior et altior Cicero, Cicerone mitior Corvinus et dulcior et in verbis magis elaboratus.
>
> Now I want to proceed more strongly and boldly, if I will have praised that previously, that the forms and the kinds of speaking change with the times. So C. Gracchus is fuller and richer compared to Cato the Elder, Crassus is more polished and ornate than Gracchus, so Cicero is more distinguished, refined, and loftier than either, and Corvinus is softer, sweeter, and more careful in his words than Cicero.[109]

Aper notes that every successive orator displays increasing oratorical prowess; even Cicero is surpassed. Aper continues to argue, "nec statim deterius esse quod diversum est, vitio autem malignitatis humanae vetera semper in laude, praesentia in fastidio esse" "It is not sufficient that what has changed is thereby worse; moreover, it is from the vice of human spite that old things are always in esteem, while current things are in distaste."[110] Aper's comments focus on oratorical style, but he nevertheless challenges general narratives of decline. He claims that change is not an inherent evil.

Tacitus refers to the same competition between generations as Pliny in the *Annals*,

> sed praecipuus adstricti moris auctor Vespasianus fuit, antiquo ipse cultu victuque. obsequium inde in principem et aemulandi amor validior quam poena ex legibus et metus, nisi forte rebus cunctis inest quidam velut orbis, ut quem ad modum temporum. nec omnia apud priores meliora, sed nostra quoque aetas multa laudis et artium imitanda posteris tulit. verum haec nobis in maiores certamina ex honesto maneant"
>
> But Vespasian was the particular source of a restrained custom, himself old-fashioned in dress and diet. Hence obedience to the *princeps* and a love of emulating were stronger than punishment from the laws and fear, unless perhaps

[109] Tacitus, *Dia.* 18.2
[110] Ib. 19.1

> there is in all things a sort of cycle as to some measure of time. Not everything among our ancestors was better, but indeed our age has produced much praise and worth imitation by our descendants. Indeed, may this contest for honor with our ancestors persist among us."[111]

Tacitus observes that Vespasian's rise ushered in a correction of peoples' characters, but he undercuts this with a suggestion that change may merely occur over generations. He counters a model of decline, noting that the past is not wholly superior and that his own age has produced its merits. The proposal of a cycle possesses an element of pessimism not present in Pliny. Perhaps Tacitus' theory of cycles resulted from the second downfall in the imperial dynasty. The Flavian era also met a violent end with Domitian. Pliny, however, wrote during the rise of Vespasian and his program of renewing Rome.[112] He notes that the current *princeps* promotes intellectual activity.[113] In such an imperial regime, Pliny was only optimistic in the change from the luxury of Nero which he pairs with the decline of intellectual pursuits. Tacitus was more cautiously optimistic. He had seen a second Nero. Nevertheless, Tacitus establishes an overall scheme of progress between generations like Pliny. Harrison characterizes the anxiety of decline in Roman literature as deriving from "enshrined ancestral values" and general opposition to change.[114] Yet, Pliny and Tacitus demonstrate a more optimistic component of Roman historiography. Their appreciation of changes in customs seems to continue Republican historical and antiquarian efforts to rationalize tradition.[115] The past is not without faults, nor certainly is their present.

Nevertheless, Roman history's didactic function of improvement encourages this continuous contest between ancestors and descendants. Such a gift to posterity is inherent in all

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[111] Tacitus, *Ann.* 3.55
[112] R. Mellor, "The New Aristocracy of Power" (2003): 82; E. Rosso, "Le thème de la '*Res publica restituta*' dans le monnayage de Vespasien: pérennité du 'modèle augustéen entre citations, réinterprétations et dévoiements" (2009): passim.
[113] Pliny, *HN* 2.118
[114] S. Harrison, "Decline and Nostalgia" (2005): 299
[115] C. Moatti, *The Birth of Critical Thinking in the Republican Rome* (2015): 184

historiography. Some Roman histories may begin from the city's founding, but they must always conclude in the author's *aevum*. Others, such as Pliny's *Ab fine Aufidii Bassi*, precisely continued the work of another.[116] No Roman history was envisioned as the final one. It could not be, if Rome was to have *imperium sine fine*. Such continuity is also present in Greek historiography. Xenophon begins his *Hellenica* precisely where Thucydides concluded his *Histories*. He then ends the *Hellenica* by passing the baton, "Ἐμοὶ μὲν δὴ μέχρι τούτου γραφέσθω· τὰ δὲ μετὰ ταῦτα ἴσως ἄλλῳ μελήσει "Let this be as far as I write; perhaps the things after these will be the care of another."[117] Even Livy, who begins his history *ab urbe condita*, acknowledges his debt to previous historians.[118] Historiography was an innately a cumulative effort. So too did Pliny envision the *Naturalis Historia*. He prefaces that his text is neither complete nor the final product. He provides future generations precisely with a model to imitate: examine the *auctores* and surpass them. His preoccupation with posterity may stem precisely from his disbelief in an afterlife.[119] Pliny's lists of *auctores* demonstrate that he stands on the shoulders of giants, but also that he rises taller precisely by standing there. By placing himself within the process of *prodere/tradere* he hopes that one day he will be included among a future Roman's list of *auctores*, another shoulder to stand on. His work is a "self-consuming artifact."[120] He does not envision the continuation of intellectual lethargy he laments. For Pliny to learn that no Roman managed to surpass his text would have disheartened him greatly.

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[116] Pliny, *HN praef.* 20; Pliny the Younger, *Epist.* 3.5;
[117] Xenophon, *Hell*. 7.27
[118] As mentioned above, Livy also cites *auctores*.
[119] He calls the belief in an afterlife *vanitas* and "puerilium ista deliramentorum avidaeque numquam desinere mortalitatis commenta sunt" "fictions of childish absurdity and of a mortality greedy to never end." Pliny, *HN* 7. 188-190
[120] Stanley Fish uses this term to refer to intellectual, particularly medical, treatises produced in the 17-century which ultimately aimed to be replaced (S. Fish, *Self-Consuming Artifacts: The Experience of Seventeenth-Century Literature* (1972)).

Conclusion

When this thesis first began, I intended to examine the sources for the zoological books to determine if recent observations about ancient prose could prove illuminating about the *auctores*. As I continued to analyze Pliny's references to his *auctores* and his language in citation, these earned my attention. The focus shifted from what Pliny told us about his sources to what the handling of the sources said about the *Naturalis Historia.* Why did Pliny so thoroughly cite his material? Why did he repeat those he considered incorrect, inaccurate, or outrageous? The answer was a self-recognized debt to his predecessors and an obligation, which bordered on obsession, to record past knowledge. Paired with this debt was his confidence for posterity, an optimism that countered his constant laments of intellectual decline.

As this thesis has shown, these central attributes of the text arise from its conception as a Roman *historia*. Pliny plays with both Greek and Roman meanings of this term to create a work traditionally Greek in subject matter while Roman in form. He attacks *luxuria* and *avaritia*, which violate *natura* and hinder intellectual pursuits. These are the same vices Livy attacks in his own preface, to whom Pliny alludes by portraying him as another author who provided a useful text, if with improper motivation. Pliny's text text employs *exempla* to revive the *mos maiorum*. However, his customs are not the behaviors of proper generals or stern senators. They are the intellectual diligence to discover and to pass those discoveries to posterity. Pliny complains that his contemporaries have recently stopped this practice, and even with a *princeps* who now supports such endeavors, his fellows do not resume this traditional practice. Vespasian imitated Augustus to present Rome as undergoing a revival and return to older roots. Pliny's work similarly attempts to usher in a resurgence of intellectual *studia.* He presents the *auctores* and the text itself as an impetus to return to this practice of the industrious *antiquii*.

We have seen that there was no Roman encyclopedia. If we identify a modern group of such texts according to *enkuklios paideia*, then Pliny's work does not meet this requirement. Other generic aspects further exist in the *Naturalis Historia*. Geography and ethnography have received the most attention as they participate in imperialistic programs and attitudes conveyed in the text. Nevertheless, an ideal of utility introduces the *Naturalis Historia*. Its *utilitas* is first established as a reference work. One may read the text selectively, optimizing their time, to acquire the desired material listed in book 1. Should they read about one topic but desire another, Pliny makes some attempts to direct his reader to the correct volume. The second form of *utilitas* results from moral statements and the text's presentation as a *historia*. Pliny arranges Roman history according to intellectual developments and transmission. Roman conquest becomes a utilitarian effort for opening the world to provide discoveries and resources to all humanity. The knowledge of these discoveries is then published and perpetuated through text so that they are widely beneficial for posterity. It is through aiding others in this manner that one attains eternal renown. It is how Pliny earned it. The *Naturalis Historia* is a peculiar form of Roman *historia*, an intellectual *historia* of the natural world, but it is one none the less.

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